THE ECONOMIC EFFECTS OF PUBLIC DEBTS

BY

SHUTARO MATSUSHITA, A. M.

SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
IN THE
FACULTY OF POLITICAL SCIENCE
COLUMBIA UNIVERSITY

NEW YORK
1929

PRINTED IN THE UNITED STATES OF AMERICA

PREFACE

A DEBT of an individual is, in the ordinary sense. his obligation to pay in the future what he borrows in the present. Similarly, a public debt is a state's obligation to pay in the future what it borrows now. Thus considered, there appears to be no fundamental difference in nature between these two sorts of debt; but in truth there are several important differences between them. In the first place, unlike a private person, a state can coerce its people to lend, as it does when it issues paper money. This is known in public finance as "forced loan". There is also the corollary that, unlike a private debtor, a state can repudiate its obligations. These differences arise from the sovereign nature of a state.[1] However, as the states become more and more democratic, and as the commercial spirit becomes even more powerful, these differences tend to become more and more potential rather than actual. In other words, the important modern states tend to conform in their debt treatment to private commercial rules. Only in times of emergencies do states deviate from this course.

In the second place, the purposes for which a state borrows may be quite intangible, and may not admit of measurable benefits, while we know that a normal private debt is incurred for the purpose of some enterprise which will yield the profit to pay the interest. Ordinarily, therefore, a mutual benefit is involved in a private borrowing. This is often not the case with a public borrowing. To quote Professor Daniels,

> The payment of interest by the state to its bond-holders often,

[1] See H. C. Adams, *Science of Finance*, p. 520.

though not always, connotes, not a public benefit, but a public sacrifice. The state may be paying its creditors interest upon a loan of capital where the actual capital borrowed was destroyed years ago in prosecuting a war, or wasted outright in some industrial venture.[1]

Thus, the effect produced by a state's fulfillment of its debt obligations may be very different from that of an individual's.

Public debts as thus far described are mainly of two kinds: forced loans and public bonds. They are further divisible into treasury notes, legal-tender notes, short-term bonds, "perpetual" bonds, etc. It is the purpose of this dissertation to trace, as far as possible, the economic effects of the creation of these various forms of obligations, and of the various uses to which their proceeds are put. In any analysis of economic phenomena it is impossible to make any generalization or to draw any general conclusion without making some sort of an assumption. In the following pages, whenever any definite statement is made without express assumptions, it is implicitly based upon our economic phrase "other things being equal."

//From ancient times the question of public debts has always been a thorny one; but never before in the history of nations has the subject been so important and so delicate as at present. The great World War of 1914-1918 played such untold havoc with the finances of the belligerent nations that they are still prostrated and are groaning under colossal debts. Recently in connection with the debt-settlement proposals of the United States to Great Britain and France, the question of public debts has become the pivotal point upon which turns international amity or discord. But the most important point of interest in our present subject is the

[1] W. M. Daniels, *Elements of Public Finance*, pp. 291-292.

tremendous economic effects of these heavy debts on the nations of the world for years to come. Since the purpose of this dissertation is in the main to make a theoretical analysis of the economic effects of public debts, we shall not deal in particular with the contemporary problems of public debts. We shall, however, as occasion may arise, touch upon a few of the problems of the time by way of illustration.

Due to many difficulties in obtaining rare historical books which were necessary to investigate for the writing of Chapter I, I am deeply indebted to the librarians of Columbia University Library and of New York City Library. But my greatest acknowledgment is due my teacher, Professor Edwin R. A. Seligman, who has first suggested the subject of this dissertation. Without his constant criticisms, helpful suggestions and untiring guidance, to say nothing of his allowing me to get access to his private library, this work would not have been completed. I am also very much indebted to Mr. Carl S. Shoup who has kindly read the entire manuscript and made helpful suggestions. My acknowledgment is due Mrs. C. A. Stewart of the Economics Department of Columbia University for the aid offered me in more ways than one in the course of the preparation of this dissertation. For the preparation of the last chapter, I am deeply indebted to Mr. Andrew Keogh of the Yale University Library, who has kindly allowed me while in New Haven to get access to the University Library. I am also indebted to Miss Anne G. Seery of West Haven for the final painstaking typing of the manuscript.

TABLE OF CONTENTS

CHAPTER I

History

To give a clear insight into the subject matter of the present discussion, a few words should be said here about the origin of public debts and the opinions of the more prominent writers of the past and the present concerning them. Says Bastable:

> To summarize . . . state borrowing appears to be, in its leading features, a creation of the constitutional period, built upon the decay of the older method of state hoarding and having its germs in the Middle Ages. It is the result of the credit system, combined with the increase of public expenses and the greater security for observance of faith to the state creditors.[1]

To this it may be added that the international wars with their stupendous costs have been the greatest single factor which has made the question of public debts such an important one. The growth of public debts the world over is clearly shown in the following figures:

Total national debts of the world (in approximate figures): [2]

1783	$2,530,000,000
1820	7,650,000,000
1848	8,650,000,000
1870	15,000,000,000
1885	23,000,000,000
1890	32,525,000,000
1900	35,000,000,000
1908	36,548,000,000 [3]

[1] Bastable, *Public Finance* (3rd ed.), pp. 627-628.

[2] *Ibid.*, p. 626. Also Seligman, *Essays in Taxation* (1920 ed.), p. 757.

[3] From C. C. Plehn, *Introduction to Public Finance* (4th ed.), p. 340.

At the end of the World War it rose to the staggering sum of $210,000,000,000.[1]

Now, as to the opinions of some of the more distinguished writers of the past on public debts. Let us take them up in as nearly a chronological order as possible. One of the earliest writers in this field was *Jean Bodin* who wrote, in 1576, of the advantages that are derived from the royal expenditures upon public works. According to this writer, the royal expenditures themselves upon public works were unconditionally beneficial to the country:

> For beyond the fact that such works are necessary, there result besides great benefits to the commonwealth; inasmuch as by this means the arts and artificers are supported, the poor are relieved, and dislike of taxes and duties is removed, when the Prince restores to the public at large and to individual subjects the money he takes from them.[2]

Nearly a century later (1667) we find *Sir William Petty* also speaking of the expenditures upon public works as in themselves beneficial to society because, among other things, public works give employment to the poor. Thus, with reference to the poor and ignorant element of society, whom he calls "supernumeraries," we find him saying,

> Now as to the work of these supernumeraries, let it be without expense of Foreign Commodities, and then 'tis no matter if it be imployed to build a useless Pyramid upon Salisbury Plain, bringing the Stones at Stonehenge to Tower-hill, or the like; for at worst this would keep their minds to discipline and obedience, and their bodies to a patience of more profitable labours when need shall require it.[3]

[1] Seligman, *Essays in Taxation*, p. 757, Table C.

[2] From Bullock, *Selected Readings in Public Finance*, 2d ed., p. 22.

[3] Sir Wm. Petty, *A Treatise of Taxes and Contributions*, London, 1667, chap. ii, p. 13.

It is evident, in the light of our present knowledge of public expenditures, that these early writers based their opinions on public expenditures upon the erroneous mercantilistic conceptions of wealth and of production. They did not realize that unproductive public expenditures impoverish the country. On this point we shall dwell at length in a later chapter.

A few decades later we find another English writer, *Charles Davenant*, dealing with our immediate question of public debt. His discussion of public debt is subordinated to the question of taxation for war, as we can easily see from the title of his book, "An Essay upon Ways and Means of Supplying the War." His chief contention was that a heavy burden of interest payment was harmful to the country and that, therefore, a large debt was to be avoided. Of taxes to pay interests upon debts, he says: "For taxes of this nature beget public and private poverty, make the people desperate, render government uneasy to the rulers, and may be rather said to fight secretly against the prince, than to give him any assistance."[1] Against excessive utilization of public credit, Davenant had a sound idea, for we find him saying in another passage that "The fonds for interests were, perhaps, good expedients, for the time, to raise money, but, if made use of frequently, may produce very bad effects in the nation; for they divert money too much from the channel of trade, where it is always best employed to the kingdom's advantage."[2] Davenant also correctly emphasized the evil tendency of the public "fonds" to raise the rate of interest, to the detriment of all the merchants who worked on borrowed capital, and who are, perhaps, the most industrious people in the country.[3] Again, he deprecated the idle class of interest-receivers as "the true drones of a commonwealth,

[1] Davenant, *op. cit.*, p. 31.

[2] *Ibid.*, p. 42.

[3] *Ibid.*, pp. 43-44.

living upon the honey without any labour."[1] Throughout this essay, Davenant seems to favor a well-distributed taxation, instead of public loan, as the best of ways and means of meeting the cost of the war.

In his other little book, "A Discourse upon Grants and Resumptions" (1700), Davenant advocated the application of forfeited and resumed lands to the payment of public debts. His chief concerns were the dangers, on the one hand, of the country "being eaten up by that canker of usury," or, on the other, of misappropriation of the money assigned for interest payment by tyrannous princes or bad ministers. While today the credit of all the great nations of the world is generally so enhanced that the interest charged on public loans is no longer usurious as in the days of Davenant, still one of the strongest arguments in favor of the extinguishment of the public debt is that the perpetual payments of large sums of interest on account of the debt are very injurious to industry and demoralizing to the tax-payers. Of this we shall see more in the following chapter. As to the misappropriation of the money assigned for debt service, we still find the evil existing today in the frequent raiding of the sinking funds in local finances. Making due allowance for the change in conditions, we therefore find that what Davenant said over two hundred years ago is still true in a general way.

About this time we find a germ of argument against tax exemption of public bonds in the writing of *James Drake*. Drake complains of the iniquitous taxes of that time in England, and of their bad effects. He tells us that as long as husbandry, manufacture and trade paid 4*s*. to the pound in taxes, while money loaned to the government received eight per cent from the government, besides some other advantageous conditions, without paying anything to the support

[1] Davenant, *op. cit.*, p. 111.

of the government, " few that have money will be persuaded to employ it in Husbandry, Manufacture or Trade, or the encouragement of them at common interest or hazard." " By this means those three springs of all our Wealth and Power being destitute of recruits, must in a short time decay and prove quite deficient." [1] He concluded, therefore, that money wherever placed should be taxed just as much as any other property.

Drake thought that there were two ways to make the moneyed class share the burden to the same extent with " Land [2] or Labour, which have hitherto born the whole burden of the day ":

Either by reducing the interest of Money Lent to the Government to such a rate, as may make the Lenders as fair contributors to the expenses of the Public, as if it were lent to any other person upon sufficient security. . . . Or by taking of it, according to its product in Interest, as it were so much a year in Land.[3]

Obviously the first is a compulsory reduction of interest which is unsound, and the second is a tax on interest on government loans, which is advocated today by the opponents of the tax-free bonds. Of this, more later. Drake erroneously thought, also, that the way to raise the Government credit to a par with the best private security is for the government to raise enough money every year by taxation to be able to pay both interest and principal of the sum borrowed for that year.[4] Finally, Drake mentions two objections which were made by many at that time against a tax on the

[1] James Drake, *An Essay Concerning the Necessity of Equal Taxes* (London, 1702), p. 3.

[2] By " Land " he means husbandry, manufacture and trade.

[3] *Ibid.*, pp. 10 *et seq.*

[4] *Ibid.*, pp. 5-6.

interest on government securities: (1) such a tax is a breach of contract, and (2) government credit will be destroyed by it. He answers ably as follows: Any contract, forced under necessity, which is unjust and unreasonable can be broken without violating justice. Furthermore, the continuance of a usurious interest and the consequent difficulty of the government in meeting it is far more destructive of public credit than the reducing of it and the subsequent punctual payment of the interest and the principal.[1]

One of the earliest English writers who specifically wrote on public credit was *Harley*. According to him, public credit is the result of honorable, just, and punctual management in the matter of funds and taxes, or loans upon them.

> This management depends not upon the Well-Executing their Offices, by the great Officers of the Treasury, and the Exchequer, but on the Care, Conduct and Vigilance of her Majesty and the Parliament; the latter in Establishing sufficient Funds; and the former in Placing able Officers, and obliging them to an honourable Management.[2]

Harley's view of public credit is similar to those of Nebenius and Rau, who wrote in the following century, and is true as far as he goes.[3] But, of course, objective as well as subjective elements must be included in a full analysis of credit.

In the beginning of the 18th century there were many writers who were apprehensive of the increasing national debt of England. *Archibald Hutcheson* was one of them. In his treatise "Computations relating to the Public Debts, April 11th, 1717," [4] Hutcheson gives us detailed figures de-

[1] Drake, *op. cit.*, pp. 14-21.

[2] Harley, *An Essay upon Public Credit*, 1710, p. 13.

[3] On this point, see C. C. Plehn, *Introduction*, pp. 372-7.

[4] From, *A Collection of Treatises Relating to the Public Debt and the Discharge of the Same*, by Archibald Hutcheson, London, 1721.

scribing the state of British national debt and urges its reduction through the faithful application of the sinking fund appropriated for that purpose. He was greatly alarmed at the debt of nearly fifty million pounds at that time, and urged that new funds be applied for debt reduction. He argued that the lowering of the interest rate alone would only enable the ministers to increase the debt without providing for its repayment and would ruin the nation's credit.

In another treatise entitled "Some Considerations relating to the Payment of the Public Debts," offered to the House of Commons, May 14, 1717, Hutcheson—after admitting the saving of interest possible by the circulation of Exchequer Bills—said that this or any other aid from credit towards the discharge of the public debts, if either entirely or mainly depended on, would be vain and ineffectual. "A solid provision must be first made for the Payment of the Publick Debts, in some certain Number of Years, and then the Benefit of Publick Credit may be made of excellent Use for the quicker Dispatch of this great Work."[1] And he commended the method of immediate payment of debts in these words: "The Public Debts may be then speedily paid off, by applying thereto so much as shall be sufficient, of the Estates, Real and Personal, of all the Inhabitants of Great Britain, in the most equal and just proportions which can be come at;[2] . . . ." From this passage we can clearly see in Hutcheson a forerunner of the advocates of Capital Levy. Hutcheson also enumerates the benefits derived from the repayment of debts, which are as follows: (1) That the revenues of the Crown would be disencumbered and the people freed from the land and malt tax. (2) Customs and excises would decrease, "which would greatly improve Trade and thereby the Wealth of the Nation, and enable the people to

[1] Hutcheson, *op. cit.*, p. 20.

[2] *Ibid.*

live at least twenty percent cheaper than they at present do." (3) The nation would be freed from the expense of supporting an army of tax-gatherers. (4) The rate of interest would be lowered, thus improving industry and trade. (5) Debts to foreigners would be avoided and thus also the interest on them which is a dead loss to the Kingdom. (6) Above all, the nation would be ready to meet any future contingency.[1] Allowing for the changes in general conditions since his time, Hutcheson's words are still true.

Ideas quite similar to Hutcheson's on the desirability of debt redemption were expressed by *Gould* some years later.[2] He said that the cancellation of the debt would make possible the removal of, or the lessening of, those duties which have been assigned for debt purposes and which "may be found to be attended with general inconvenience, or unreasonable Hardship on particular Persons, Employments or Conditions of life amongst us."[3] Gould differed from Hutcheson, however, as to the means of redeeming the debt. He is really the forerunner of Richard Price, for his great confidence in the efficiency of the compound interest principle[4] operating in a sinking fund, and his insistence on the maintenance of the sinking fund even in time when money has to be borrowed[5] in some other way, are almost identical with the ideas expressed by Price about half a century later. Gould quite correctly warned the government against reducing the interest rate of government bonds to lower than the four per cent then paid on them. He discerned the truth that, unless the general demand for and supply of money caused a fall in the general rate of interest, the attempt on the part of the

[1] Hutcheson, *op. cit.*, pp. 20-22.

[2] Gould, *An Essay on the Public Debts of this Kingdom* (London, 1726).

[3] *Ibid.*, p. 55.

[4] *Ibid.*, pp. 62-83 and esp. pp. 79-80.

[5] Gould, *op. cit.*, p. 84.

government to reduce the rate on its securities would be attended with speculation, disturbance in business conditions and dissatisfaction among government creditors.[1]

A year after the appearance of Gould's essay, *Pulteney* re-examined the account given by Gould of the condition of the national debt of Great Britain between 1716 and 1725.[2] Having found that the debt had been increased by nearly ten million pounds instead of having been diminished by over two million pounds, as was claimed by Gould, Pulteney opposed Gould's belief in the efficacy of the sinking fund. Pulteney believed in the mathematical correctness of the idea, and also, even in its actual effectiveness *if* the fund is faithfully applied for the diminution of the debt, and *if* no new debts are contracted at the same time. But he was of the opinion that these two conditions would not be fulfilled; rather he feared that the very existence of the sinking fund would be an inducement to contrary acts on the part of the government.[3] Again, he pointed out the fallacy of Gould in thinking that by a sinking fund a large increase of debt can ultimately be paid off at a small cost, and correctly reminded one that Gould seemed to have forgotten about the sum total of all the interest that had to be paid during the existence of the debt, besides the payment on sinking-fund account. Pulteney again refuted Gould for minimizing the good effect of reducing the rate of interest on government bonds from four to three per cent, and he calculated in figures the amount of saving that would be effected by such reduction.[4] But, what is most significant, he recognized the truth that the only way to pay off the debts is for the government to spend

[1] Gould, *op. cit.*, pp. 98 *et seq.*

[2] Pulteney, *A State of the National Debt*, London, 1727.

[3] *Ibid.*, pp. 148 *et seq.*

[4] Pulteney, *op. cit.*, p. 158.

every year less than it is able to raise, and to apply the surplus for the repayment of the debt.[1]

In marked contrast to the opinions of the above writers was the extreme optimism shown by Melon. In his *Essai Politique sur le Commerce,* 1736, we find his notorious statement that "The debts of a state are the debts of the right hand to the left hand, of which the body will not be weakened at all, if it has the necessary quantity of nourishments and if it knows how to distribute those [debts]."[2] Melon disagreed with Voltaire, however, who believed in an unlimited national debt.[3] In his above essay he cites at length the case of John Law's project, to prove the disastrous effects of the over-issue of currency.

In England, in the second quarter of the 18th century, the idea that a national debt is national wealth was gradually gaining credence even among scholars. The celebrated English jurist, *Blackstone,* exposed the fallacy of that idea in his "Account of the National Debt."[4] Blackstone rightly said that the land, the trade and the personal industry of the people are the sources from which the money must arise that supplies the several taxes; that the "property" of the public creditors consists in a certain portion of these taxes; that, therefore, to the extent that these taxes are pledged for debt, the nation is the poorer.[5] The only advantage, according to this writer, that can result to a nation from public debts is that they serve the trading people by increasing the supply of currency, which can be "employed in any beneficial undertaking, by means of this its transfer-

[1] Pulteney, *op. cit.,* pp. 177 *et seq.*

[2] Melon, *op. cit.,* chap. xxiii.

[3] Leroy-Beaulieu, *Traité de la science des finances,* 3rd ed., Paris, 1883, chap. iii.

[4] Blackstone, *Commentaries,* bk. i, chap. viii.

[5] Blackstone, *op. cit.,* pp. 296-97.

able quality; and yet producing some profit even when it lies idle and unemployed." [1] But he firmly believed that the magnitude of the national debt of England at that time far exceeded all calculations of commercial benefit. He enumerated as follows the evils arising from the large debt of that time: (1) The enormous taxes required for the payment of interest are harmful to trade and manufactures because they raise the price of the workmen's subsistence as well as the prices of the raw materials and the commodities. (2) If a part of the debt be owing to foreigners, that would cause either a drain on the specie of the kingdom or a granting of undue privileges in order to induce the same foreigners to reside in the kingdom. (3) If the debt is domestic, it means taxing the active and industrious subjects in order to maintain the indolent and idle creditors. (4) Lastly, and principally, it weakens the kingdom by anticipating those resources which should be reserved to defend it in case of necessity.[2]

Blackstone, in his zeal to depict the disadvantages of the national debt, overlooked its many advantages, but his remarks on the evils of a large national debt are very true. Lastly, he rightly reposed high hopes in the sinking fund, formed from real surpluses as an agent for discharging the debts.[3]

Perhaps the most optimistic of the English writers concerning public debts was *George Berkeley*. He it was who said that the public funds were a mine of gold.[4] Berkeley believed that the prosperity of England was mainly due to her public credit.[5] He was wrong in thinking that the instrument of the credit was itself the source of wealth. He

[1] Blackstone, *op. cit.*, pp. 296-297.

[2] *Ibid.*, pp. 297-98.

[3] *Ibid.*, pp. 299-300.

[4] See "The Querist," Question 233.

[5] *Ibid.*, Questions 234 and 235.

did not realize that he was putting the cart before the horse when he queried: "Whether, as our current domestic credit grew, industry would not grow likewise; and if industry, our manufactures. . . .?"[1]

Another writer who showed an extreme optimism about public debts from an entirely different point of view was *Richard Price.* Price wrote a little book called "Observations on Reversionary Payments" which had a profound influence upon statesmen and financiers for many years, for it gave them the false idea that a sinking fund as such, operating at compound interest, effected miraculous results. Even wise statesmen and financiers like William Pitt and Alexander Hamilton were not free from such an illusion. Price's idea[2] in brief was, that a relatively small sum applied annually to discharge a given debt would, according to the operation of the law of compound interest, effect the saving of a greater and greater annuity to the public so that a debt of any amount could be discharged, in time, gradually and insensibly at a small annual charge "without interfering with any of the resources of government." Price erred in overlooking the obvious fact that, if the original debt is large, a large annual interest must be paid besides the small payment on account of principal. Then again, he had erroneously assumed that the debt was never to be increased by subsequent borrowings. Of what avail; one may ask, if only 100,000 pounds were annually produced for the discharge of the national debt, while once in every few years millions of pounds were freshly added to that debt?

It is perhaps because of his above-stated errors that Price made this ludicrous statement:

It is an observation that deserves particular attention here, that,

[1] See "The Querist," Question 236.

[2] See Price, *op. cit.*, 3rd ed., 1773, pp. 137-139.

on this plan, it will be of less importance to a state what interest it is obliged to give for money: For the higher the interest the sooner will such a fund pay off the principal. Thus, one hundred millions borrowed at eight percent and bearing an annual interest of eight millions, would be paid off by a fund, producing annually 100,000 pounds, in 56 years; that is, in 39 years less time than if the same money had been borrowed at four percent.

In marked contrast to the optimism of Berkeley or Price was the gloomy view of *David Hume* concerning the possible effects of public debts. The expedient of mortgaging the future public revenues, said Hume, was sure to burden posterity, and its abuses would lead the country inevitably to "poverty, impotence, and subjection to foreign powers."[1] Hume feared, and perhaps justly, in view of the conditions of his time, that the temptations offered to public officials by loans which enable them to gain a reputation without overburdening the people with heavy taxes are sure to lead to abuse in every government. And he makes the oft-quoted statement that "It would scarcely be more imprudent to give a prodigal son a credit in every banker's shop in London, than to empower a statesman to draw bills in this manner upon posterity."[2] Hume thought there were also certain advantages in public debts. Thus, like Blackstone, he said that the national debt furnishes merchants with a species of money, which enables them to trade upon lower profit, which in turn renders commodities cheaper, and which again, in turn, causes a greater consumption and hence a greater development of industry in general. Again, he thought that public funds served the great merchants as votaries for their idle profits; that, therefore, this induced more men

[1] Hume, *Essay on Public Credit*, 1752. (From reprint in Imlac's "Hume on Public Credit, with remarks," London, 1817), pp. 2-3.

[2] Hume, *op. cit.*, p. 4.

with large stocks and incomes to continue in trade instead of becoming country gentlemen; "and this, it must be owned, is of some advantage to commerce, by diminishing its profits, promoting circulation and encouraging industry." [1]

According to Hume there are, however, counterbalancing disadvantages in public debts. These are: (1) People and riches become too concentrated in the capital city, together with power and advantages. (2) Serving as money, public funds render labor and commodities dearer than usual. (3) The taxes necessary to pay the interest of the debts are apt either to raise the wages of or be an oppression on the poor people. (4) Since foreigners are possessors of a large share of our national funds, they render the people, in a way, tributary to them, and may in time intensify this relationship. (5) Public funds encourage indolence by enabling their holders to live on their revenues without effort.[2] Hume furthermore rejects Melon's ideas of the debt of the right hand to the left hand on the ground that the heavy taxes necessitated by heavy debts will be ruinous and destructive to the people. In Hume's opinion, the result of an enormous public debt must be that either the prince will wield absolute power to tax the annuitants, who are the only persons left capable of bearing tax, or that the latter will succeed, through their power in Parliament, in resisting this. Hence, "It must, indeed, be one of these two events; either the nation must destroy public credit, or public credit will destroy the nation." Finally, Hume thought that under those circumstances, when a new great demand for funds is made upon the nation, by a war for example, either the government will destroy public credit by seizing upon all those revenues which are bound for interest-payment, or the nation will be conquered.[3]

[1] Hume, *op. cit.*, pp. 5-6.

[2] Hume, *op. cit.*, p. 8.

[3] *Ibid.*, pp. 16-20.

Although here and there in his writing we find a glimpse of mercantilism, yet allowing for the conditions prevailing in his days, Hume's ideas on public credit are illuminating and generally sound.

We now come to a writer who most unequivocally expressed the idea that a national debt was national wealth. In his "Essay on Circulation and Credit" [1] *Issac Pinto* says:

> Let us come to the fact. I affirm that the national debt has enriched the nation, and I prove it thus. On every new loan the government of England mortgages a portion of taxes to pay the interest and creates a new artificial capital, which did not exist before, which becomes permanent, fixed and solid, and by means of credit circulates to the advantage of the public, as if it were in effect so much real treasure, that had enriched the kingdom.[2]

He expressed the same idea in different words throughout the first half of his essay. According to Pinto, public funds served as money, and as they increased they gave nourishment to industry and commerce. Needless to say, he had mistaken the claim on wealth for the wealth itself; he had taken the chaff for the grain.

Pinto, however, partly retrieved his mistaken notions when in the latter part of his essay ~~he opposed an unlimited~~ national debt. As a reason for his opposition he mentioned the fact that by the enormous mass of public funds "the price of stocks is more sensibly affected now, than formerly, at the least apprehension of political events." [3] Still, he erroneously believed that "too extensive a discharge of debt would be useless and dangerous." [4] In Part 2 of his essay, Pinto advocated the maintenance of a sinking fund in

[1] *English translation by Sir Philip Francis*, London, 1774.

[2] Pinto, *op. cit.*, pt. i, p. 17.

[3] *Ibid.*, p. 43.

[4] *Ibid.*, p. 51.

time of war as well as in time of peace, as he naïvely considered that the government ought to keep on purchasing its own bonds in the stock market in order to maintain its credit.

Alexander Hamilton held a similar view as to the beneficial features of funded public debts. He differed from Pinto in stating that in order to render public credit immortal it should be accompanied by the provision for its extinction. He has substantially expressed a correct view in his later statements, when he distinguishes between "an absolute increase of capital or an accession of real wealth, and an artificial increase of capital, as an engine of business, or as an instrument of industry and commerce." [1]

Adam Smith clearly exposed the fallacy of the ideas represented by Pinto when he said that Pinto does not consider that the capital which the first creditors of the public advanced to government was, from the moment they advanced it, a certain portion of the annual produce diverted from the function of capital in order to serve as revenue.[2] Smith admits that the creditors receive annuities and these they either could sell or use as a basis for borrowing new capital. But he says that this new capital which they thus borrow must have already existed in the country and must have been productively employed. In other words, Smith clearly saw that what public creditors do is to hand over their own capital to the government and then borrow other people's capital for their own use when they sell their public funds; that, therefore, this involves mere transfers, but no increase in the capital stock of the country.

It is surprising how abusive practices of the times affect adversely the reasonings of even the clearest thinkers. For we find that Adam Smith erroneously assumed that all public expenditures were unproductive and wasteful.[3] As a result

[1] See Bullock, *Selected Readings in Public Finance*, 2d ed., p. 827.

[2] Adam Smith, *Wealth of Nations*, vol. ii (Everyman's ed.), pp. 406-7.

[3] *Ibid.*, p. 407.

of this assumption, he further maintained that public debts will result in higher taxes, that higher taxes fall on landlords and owners of capital stock because land and capital stock are the two original sources of all revenue, private and public. Now, according to Smith, a higher tax on landlords diminishes the fund left available to them for maintenance and improvement of land; hence agriculture will necessarily decline. On the other hand, by various taxes upon the necessaries and conveniences of life, the owners and employers of capital stock will have their real income diminished in comparison with income in other countries. They will move to foreign countries if taxes become too heavy. Hence capital will tend to move out of the country.[1] Undoubtedly, in the light of our present knowledge, we realize that those ideas of Smith were due to a narrow conception of capital and to an imperfect knowledge of the shifting and incidence of taxation which was common at his time. Today, even on the basis of Smith's idea of capital as a fund of material goods, income taxes take tolls from others than the owners of capital and the landlords.

We now come to another writer whose views within the limit of his discussion were so obviously correct that they almost sound like truisms. Robert Hamilton, in his "Inquiry concerning the rise and progress, etc. of the National Debt of Great Britain and Ireland," [2] brought out the following points under the heading "General principles of finance." [3] He pointed out (1) that the amount of revenues in time of peace ought to be greater than expenditures, and the surplus ought to be applied for the redemption of debts contracted in former wars or reserved for future wars. (2) That the cost of modern wars has been so great that the revenue

[1] Adam Smith, *op. cit.*, p. 410.

[2] 3rd ed., Edinburgh, 1818.

[3] See *supra*, pt. 1, pp. 7-10.

raised within the year is insufficient to defray it; hence the necessity of resorting to the system of loans. (3) That in every year of war, where this system is adopted, the amount of public debt is increased, the increase depending upon the length of the war and the excess of the expenditure over the revenue. (4) That in every year of peace the national debt is diminished if the excess of revenue over the expenditure is properly applied, the amount of debt discharged depending upon the length of the period of peace and the amount of the annual surplus. (5) That if the periods of war and peace and the amounts of their expenditures and savings, respectively, be so related that more debt is contracted in every war than is redeemed in the succeeding peace, the outcome is a perpetual increase of debt; and the ultimate result of the continuance of the loan system must lead to an amount of debt which the nation cannot bear.

The only effectual remedies to this danger are the extension of the relative length of the periods of peace; frugality in peace establishment; lessening the war expenses; and increase of taxes, whether permanent or levied during the war. If the three former of these remedies be impracticable, the last affords our only resource. By increasing the war taxes, the sum required to be raised by loan is lessened. By increasing the taxes in time of peace, the sum applicable to the discharge of debt is increased. . . .[1]

Here, then, we see in a nutshell the fundamental arguments involved in taxes versus loans in war finance.

Hamilton clearly disfavored the continued existence of public debt, for he said that the interest of the public debt, for the most part, "is drawn from the profits of the industrious part of society, and paid to the idle and luxurious," and that the amount necessary for interest-payment may so increase as to cause the ruin of the taxpayers and, ultimately,

[1] Robert Hamilton, *op. cit.*, p. 9.

the stockholders.[1] Lastly, he refuted Richard Price point by point in Part III of the same book [2] and completely exploded Price's illogical ideas, and in addition proved by actual figures the harmful effects on British finance of the application of Price's theory by Pitt, Vansittarts and others. It was Robert Hamilton, therefore, who sounded the death knell of the compound-interest theory of Richard Price.

David Ricardo was another writer who gave preference to taxes over loans. In his "Essay on the Funding System" [3] he gives us two reasons why he prefers taxes to loans: The first is the aversion of the people to heavy taxation, which prevents imprudent expenditures by the government; the second is the probability that taxation will be obtained from the revenues of the people, while loans will usually come from their capital. There is a good deal of truth in the first reason. This is one of the important arguments advanced by the advocates of the so-called pay-as-you-go plan. On this point we shall have more to say later. As to the second reason, however, it is very questionable. We know that Adam Smith expressed an idea similar to this second point of Ricardo. As all modern writers admit, loans, if not too great, may be made from "revenues", while heavy taxes may be paid from "capital". The truth of the matter is, however, that in private economy no sharply definable line is drawn between revenue and capital.

In the same book, Ricardo claims that the system of a sinking fund is "useful as an engine of taxation," and that if any portion of the taxes paid expressly for the sinking fund be paid from revenues which otherwise would have been expended, there is so much more accumulation of wealth.[4]

[1] Robert Hamilton, *op. cit.*, p. 33.

[2] *Ibid.*, pp. 175-94.

[3] Third Edition, 1871, by J. R. McCulloch.

[4] Ricardo, 530-37.

But since no guarantees can be given by the ministers that the sinking fund shall be faithfully applied to the payment of the debt, he admits its evils and suggests a tax on property (in other words, capital levy), as its alternative.[1] Furthermore, Ricardo objected to the sinking fund on another account: he feared that the accumulation of a sinking fund to any considerable sum was dangerous in that it would tempt ministers of state to enter into a war with very little provocation.[2]

When we turn to French writers of the period of Ricardo, we seem to find them also possessed of the idea that the government borrows for the purpose of barren consumption and expenditure. Thus, for instance, *Jean Baptiste Say*,[3] who was one of the foremost French writers of that time, held that idea. He thought that before the public borrowing there existed two productive funds of capital, one consisting of that portion loaned and the other consisting of the remaining portion, out of the revenue of which the future taxes are to be paid; that after the borrowing only the second of these remains. We know that no matter how much public borrowing takes place, if the government utilizes its proceeds productively there is no loss of capital. Say, however, clearly saw the fallacy of the idea that a public loan brings an increase of national wealth. "A written contract or security," said he, "is a mere evidence that such and such property belongs to such an individual. But wealth consists in the property itself and not in the parchment, by which its ownership is evidenced." [4]

As to the merits of public borrowing, the same writer in the first place recognized the truth that loans ~~enable the state~~

[1] Ricardo, p. 545.

[2] *Ibid.*, p. 546.

[3] Bullock, *Selected Readings in Public Finance*, pp. 840-44.

[4] Bullock, p. 841.

to apportion the burden entailed by a sudden emergency among a great number of successive years. Secondly, he saw the inevitability of loans when he said that the ordinary expenditure seldom falls much short of the income, and if the expenditure must be doubled to save the nation from ruin, borrowing is usually the only resource, unless extreme measures are resorted to. Lastly, Say perceived that public loans provide an investment for small portions of capital "in the hands of persons incapable of turning them to account, who would probably keep them locked up, or spend them by driblets, but for the convenience of such an investment." [1]

As late as 1832 we still find a prominent English economist, *Chalmers*,[2] contending that the system of public borrowing is economically disadvantageous and also oppressive to the laboring class. He held that all the proceeds of the loan come from that part of the circulating capital that otherwise goes to pay the laborers; that, therefore, the laborers' share is diminished and the capitalists' benefit is increased. The reason, according to Chalmers, why public borrowing is economically disadvantageous is, that the system of loans puts double pressure on the country: first in the original sacrifice when the loan is made and then in a later sacrifice for interest-payment and repayment of capital.

Bastable rightly refutes Chalmers to this effect: In the first place, Chalmers' contention is not true that a loan draws up that portion alone of circulating capital which would have gone to reward labor. The fact is that the flowing capital would have been employed either on labor, raw materials, or capital—according to the circumstances. Of course Chalmers' idea is based upon an acceptance of the wages-fund theory. Even granting the wages-fund theory, however, his idea must be modified to the extent that a portion of the

[1] Bullock, p. 843.

[2] See his *Political Economy* (Glasgow, 1832), vol. ii, pp. 71-89.

loaned fund after all goes to the workers as wages for government service. In the second place, his contention that all public loans are economically disadvantageous rests upon the assumption that all public debts are incurred for economically unproductive purposes. Where the community benefits economically as the result of a government outlay, there is neither "original sacrifice" nor "further sacrifice."

Even *John Stuart Mill* was not free from Chalmers' errors. Mill's idea regarding public debts was quite similar to Chalmers'. The only element of truth contained in the above idea of Chalmers, as seen in the light of our present knowledge, is due to this fact: In-so-far as a public loan is a drain upon the loanable floating capital, it tends to raise the rate of interest. A higher rate of interest means that smaller shares will go to the other factors of production. Wages will be lessened to that extent.

Mill, taking the supposed case in which the government destroys by war expenditures the whole amount borrowed from the lenders who took that amount out of a productive employment in which it had actually been invested, observes:

The capital, therefore, of the country is this year diminished by so much. But unless the amount abstracted is something enormous, there is no reason in the nature of the case why next year the national capital should not be as great as ever. The loan cannot have been taken from that portion of the capital of the country which consists of tools, machinery, and building. It must have been wholly drawn from the portion employed in paying labourers: and the labourers will suffer accordingly. (!) But if none of them are starved, if their wages can bear such an amount of reduction, or if charity interposes between them and absolute destitution, there is no reason that their labour should produce less in the next year than in the year before. If they produce as much as usual, having been paid less by so many millions sterling, these millions are gained by their employers. (!) The breach made in the capital of the country is

thus instantly repaired, but repaired by the privations and often the real misery of the labouring class. Here is ample reason why such periods, even in the most unfavourable circumstances, may easily be times of great gain to those whose prosperity usually passes, in the estimation of society, for national prosperity.[1]

Again, Mill maintains that the loans of the less wealthy countries are made chiefly with foreign capital while the loans of the rich and prosperous countries are generally made, not with funds productively employed, but with those that are constantly being accumulated from income, and oftentimes with that part which, but for the loan, would have migrated to colonies or would have been invested abroad.

In these cases . . . the sum wanted may be obtained by loan without detriment to the labourers, or derangement of the national industry, and even perhaps with an advantage to both, in comparison with raising the amount by taxation, since taxes, especially when heavy, are almost always partly paid at the expense of what would otherwise have been saved and added to capital.[2]

Mill was quite correct on this point, as we shall see later in Chapter III of the present thesis. Mill again points out[3] that the loans obtained from capital which is invested or destined to be invested in productive employments, are worse than taxation, because, according to him, with the latter the evils will have ended with the emergency, while with the former—besides the laboring class virtually having been taxed exclusively — the state will come to owe interest to the employing class in perpetuity. Here, his argument is again vitiated by the wrong idea that the capital relinquished by

[1] J. S. Mill, *Principles of Political Economy*, 5th ed., vol. i, pp. 110-111.

[2] Mill, *op. cit.*, vol. i, p. 113.

[3] See vol. ii of his *Principles*, pp. 478-80.

the public creditors is replenished at the cost of the laborers. Therefore, although his proposition that the loans obtained from productively employed or employable capital are injurious is correct, the nature of the injury as stated by him is not true. But we shall discuss this at greater length in a later chapter.

Mill, however, said that public loans are not followed by the above-mentioned harmful consequences if "what is borrowed is foreign capital, the overflowings of the general accumulation of the world" or if "it is capital which either would not have been saved at all unless this mode of investment had been open to it, or after being saved, would have been wasted in unproductive enterprises, or sent to seek employment in foreign countries."[1] Whether this limit is or is not overstepped can be proved by the effect of loans on the rate of interest. When they raise the rate of interest, that is sure proof that productively employed capital is trenched upon.[2] And lastly, on this phase of the question, Mill makes the apologetic statement that, since in a country where wealth and population increase faster than government expenses the burden will be less and less felt, and since those extraordinary expenses of government which are fit to be incurred at all are mostly beneficial beyond the present generation, there is no injustice in making posterity pay a portion of it if the inconvenience of payment by the exertions and sacrifices of the present generation is too great.[3] Here, then, we see that Mill partially admits that not all government expenditures are wasteful.

Mill's most modern idea concerned the question of redemption. He believed that, although the payment of interest is no national loss when the debt is domestic, but a

[1] Mill, *op. cit.*, vol. ii, p. 480.

[2] *Ibid.*, p. 481.

[3] *Ibid.*, p. 483.

mere transfer, this transfer, being compulsory, is a serious evil, and the raising of the needed extra revenue by any system of taxation causes so much expense, vexation, disturbance of the channels of industry, and other mischiefs over and above the mere payment of the money wanted by the government, that an avoidance of the necessity of such taxation repays considerable effort.[1] He suggests two methods of paying off national debt: "Either at once by a general contribution, or gradually by a surplus revenue." The former, in Mill's opinion, is best, and practicable if property alone could justly be charged with redemption. But since other than property owners may and should justly be called on also, the result is that the "propertyless" income-receivers have to resort to private loans for this requirement upon them, which means the payment of higher interest and other disadvantages appearing in private loans. Therefore, repayment of national debt by means of surplus revenue is the only feasible method left.[2] Here, again, Mill is quite correct, as we shall see later under the discussion of capital levy.

Mill refuted the argument that the amount to be raised for the redemption of the debt should be left to "fructify in the pockets of the people." He said that by the word "fructify" must be meant that the amount, if left in private pockets, would be saved and converted into capital. This would take place with only a part of the amount left in private pockets, while, if taken up by the government and used for debt redemption, the whole of the amount would be saved.[3] In his opinion, however, it was not advisable in all cases to maintain a surplus revenue for the extinction of debt. If there are some very bad taxes in the country, these

[1] Mill, *op. cit.*, vol. ii, p. 483.

[2] Mill, *op. cit.*, vol. ii, pp. 483-5.

[3] *Ibid.*, pp. 485-6.

should be abolished by the application of the surplus revenue. After that, such surplus revenue as might arise from any further increase in the produce of the taxes should not be remitted but applied for the payment of debt.[1] And finally, Mill refuted the contention "that some amount of national debt is desirable and almost indispensable as an investment for the savings of the poorer or more inexperienced part of the community." He admitted the need of offering an investment opportunity to such people, but he thought that the same secure opportunity of investment can be offered to those people by establishing, for instance, a number of national banks of deposit all over the country.[2] Certainly, from our modern point of view, the investment opportunity offered by public bonds is merely an incidental advantage, and it could not serve as a justification of the existence of a public debt.

Let us now turn to a notable German writer of this period. *Carl Friedrich Nebenius* was, in our opinion, perhaps the most comprehensive writer of the early 19th century on public credit. We are here able to note only a few salient points in his thoughts on public credit which he expresses in his book "Der öffentliche Kredit."

On the fundamental concept of public credit, Nebenius tells us that the credit which a government enjoys rests upon the conviction of the public that the government will not only be able to fulfil, but also has the will to fulfil completely the obligations upon which it has entered or is intending to enter; and that the ability of the government to fulfil its obligations depends upon the richness of the source from which the government must obtain its revenues, and the richness of the source depends in turn upon the national income.[3] Nebenius, therefore, recognized clearly both the subjective and objective bases of credit.

[1] Mill, *op. cit.*, vol. ii, pp. 486-7.

[2] *Ibid.*, pp. 487-88.

[3] Nebenius, *Der öffentliche Kredit* (1820), chap. iv.

On foreign loans, Nebenius held a broad view. He considered that in peaceful times, a country whose agriculture, manufacturing and commerce are still capable of taking up a considerable amount of capital, and which possesses an internal debt bearing a high rate of interest, will have the advantage—through the strength of its credit—of borrowing foreign capital, which will fructify its industry and increase its national income.[1] To the comprehensive view of this writer, foreign loans were not the cause of a national burden, but the means of enriching the country. Of this we shall have more to say later, under the subject of foreign loans.

Nebenius again showed his deep insight when he discussed the question of depreciation of currency. He believed that where the depreciation brought about by the discredit of the government is temporary and inconsiderable, public interest demands that all means be used to restore the paper to its original value and to restore cash circulation as quickly as possible. Where, however, the depreciation occupies a period of many years and is at the same time very considerable, it is false justice to redeem the paper completely at its nominal value. The depreciation would have increased in proportion to the amount of paper money issued, and the government would have received in value much less than the face value of the money. Therefore, justice cannot demand the government to pay more than it has received. On the other hand, the government should redeem its paper money at least at the issued value. Only those have a claim for reparation who have suffered a loss by the gradual depreciation of paper money. To ascertain these persons and the amount of their loss, however, is impossible. Also, it is unjust that the individuals, who, at the moment that the government determines for the redemption, are accidentally in possession of considerable sums, receive the indemnification

[1] Nebenius, *op. cit.*, chap. iv.

for the losses which the former possessors have suffered long ago. In other words, the harm done by the depreciation is irreparable. Therefore, under those circumstances, the government need not make a complete redemption at the nominal value. The best thing to be hoped for is that such inconvertible paper be never introduced, and that where it exists, its further depreciation be stopped and that it be removed entirely as soon as possible.[1] In the light of the European monetary situation of today, what Nebenius said a century ago still holds true. Observe the recent acts of the Italian and French governments in fixing the values of their currencies. Of these questions, however, we shall discuss more in a later chapter under "forced loan."

As to the payment of war debts, Nebenius held ideas similar to those of Blackstone, Hume and Robert Hamilton. He spoke of the dangers of the accumulation of debts in a series of recurring wars until the interest of the debt absorbs the whole disposable means of a government, the creditless condition leaving the nation to become the prey of a powerful and prudent neighbor or to become bankrupt at the least extraordinary incident; or if not these, to become so situated that in order to fulfil its obligations the government must heap taxes on taxes, which become more and more unyielding and oppressive and hurl the people into need and despair.[2] He tells us, however, of the ineffectiveness of the sinking fund as a means of extinguishing the national debt, and he mentions the case of Great Britain as an example. He saw that the statesmen and financiers never faithfully follow the far-reaching plan of the sinking fund, and that, if they do, the existing plan often requires the borrowing of money at a higher rate of interest in order to pay off the debt incurred at a lower rate of interest. On this question, Nebenius, like

[1] Nebenius, *op. cit.*, chap. iv.

[2] *Ibid.*

others, was swayed more by the existing conditions of the times than by the theoretical considerations. We now know that a sinking fund formed from surplus revenues is a commendable means for the redemption of debts. The fact that it is often abused does not invalidate its real merits. But of this, more later.

As to the fundamental considerations of the system of national loans, Nebenius, like many of his predecessors and contemporaries, was again misled by the existing conditions of his time. For, while he admitted that the system of national loans is a beneficent means of mitigating the pressure of passing extraordinary burdens, that it renders industry important services, etc., yet he said that its disadvantages are far greater than its advantages. The disadvantages of national loans are, according to Nebenius, due to their unproductive applications for the purposes of war, for covering extravagant expenditures, and the like, thereby diminishing the capital funds of the country.[1] Nebenius thought that since national loans destroy capital which industry and thrift have gathered, they work against one of the most important principles of the betterment of social condition.[2] Again, "Since the loans raise the rate of interest through destruction of accumulated values, they hinder especially the improvement of the position of the industrial and agricultural classes." [3] The national loans, according to Nebenius, have also a disadvantageous influence on the distribution of wealth among the members of society. He gave the reason as follows:

The distribution of wealth in a country seems, according to the nature of the case, to proceed all the more uniformly, the lower

[1] Nebenius, *op. cit.*, chap. v, Capit. 3-5.

[2] *Ibid.*, Capit. 6.

[3] *Ibid.*, Capit. 7.

the gains of capital. Capital and ability must coöperate for the production of goods. The former is always more or less unequally distributed; the latter is present with every individual. Now the lower the gains of capital become, the greater, relatively, are the claims of the industry which a large numerous class shares, while the savings which can be formed from the gains of capital accumulate only with a small number of citizens. Surely in this regard, the raising of interest rates, which the national loans effect, promotes quick accumulation of wealth in particular hands.[1]

So far as public loans are made for unproductive purposes, Nebenius' above reasoning is quite correct. However, he exaggerated the evils of public loans for unproductive purposes when a few lines later he said that, without the opportunity which a public loan offers to capital wealth for the accumulation of its gains, modern times might not have afforded so many examples of colossal private fortunes, with which the position of our popular classes stand in glaring contrast.[2]

Finally, Nebenius recognized such truths as this, that growing national debts cause progressively an ever greater part of the national income to be transferred from the industrious portion of society to the extravagant and idle portion;[3] that, since rapidly increasing national debts cause an unlimited accumulation of the kind of property which consists of public securities, they produce an instrument for an unregulated speculation by which the natural progress of commerce is disturbed, and in manifold ways produce interruption, complication, and disorder in the circulation and on the market;[4] that the system of national loans tends to ex-

[1] Nebenius, *op. cit.*, Capit. 8.

[2] *Ibid.*, Capit. 9.

[3] *Ibid.*

[4] Nebenius, *op. cit.*, Capit. 10.

travagant public expenditures; and that wars are more easily brought about because the people will not immediately feel the pressure of the expenses.[1]

Karl Dietzel was another German writer who had admirably illuminating ideas on the nature of credit in general, and on public credit in particular, but who in his enthusiastic commendation of the highly beneficial nature of public credit, was misled into an extreme and untenable conclusion. In his book, "Das System des Staatsanleihens," he refuted the erroneous ideas of the former writers regarding credit. For the first time, Dietzel clearly established the theory, which is now universally recognized as true, that credit is important not as a medium of circulation, but as a means by which capital is voluntarily transferred from those who are able to utilize it less productively to those who are able to use it more productively, thus bringing about an ever-increasing amount of capital.[2]

Dietzel compares public and private credit and says that the most important mark of distinction is that the repayment of the principal is the main condition of the latter, while repayment is not contemplated at all in the former. He explains this alleged non-repayability by the public borrower as due to the fact that the state chiefly produces immaterial goods and possesses immaterial capital, and hence it cannot pay back all the capital it borrows. But the perpetual life of the state and its powers enable it to pay interest. Dietzel furthermore claims that the repayment by the state is injudicious inasmuch as it cannot be accomplished otherwise than by the replacement of taxpayers by the creditors, whereas the same thing can be accomplished much more simply by the individuals through buying and selling of the bonds among

[1] Nebenius, *op. cit.*, Capit. 11.

[2] *Supra*, chap. iv, pp. 21-31.

themselves.[1] Dietzel was entirely mistaken in his comparison of public and private credit, for we know that, as far as the question of redemption is concerned, there is no fundamental difference between the two kinds of credit. Again, regardless of whatever application a state makes of the proceeds of its loans, redemption of its debt is one of the essential conditions for the maintenance of its credit. Dietzel seems, also, to have entirely disregarded the evils of paying interest year after year on debts contracted long since. These questions, however, will be discussed in particular in subsequent chapters.

The favorable effect of the system of national credit on individual economies was correctly set forth by Dietzel when he said: "Because it draws up the capital necessary for the purposes of common economy from the places where they can be spared with the least disadvantage or where they are without any investment, it furnishes all capital the possibility of the most appropriate investment and produces a steady stimulus for their increase." [2]

After speaking of the active endeavor of all sensible governments to preserve and develop credit, Dietzel made this surprising statement:

> From this is explained the at first sight surprising phenomenon that, a state generally has more credit the more it has already made use of it, or, what will express the same phenomenon (!) the deeper it is already indebted. Upon the same facts rests the observance derived from experience that a state should have debts in order to have great credit, and that, therefore, the indebted state may be the most powerful.[3]

Perhaps Dietzel observed England and other countries

[1] Dietzel, *op. cit.*, chap. vi, pp. 116-7; also pp. 142-4.

[2] *Ibid.*, p. 125.

[3] *Ibid.*, pp. 133-34.

growing prosperous in spite of their debts and wrongly surmised that their prosperity came from their debts.

Dietzel rightly said that involuntary means of government borrowing, namely, compulsory loans, payment of expenditure arrears by issue of government notes, and national paper money, are objectionable and most zealous endeavor must be made as soon as possible to restore to their proprietors the capital raised by compulsion, by means of voluntary loans. His objection is that such involuntary borrowings remove capital from where it would have created greater product-values and leave it where it might have been dispensed with without corresponding loss.[1] To Dietzel there is nothing exceptional or extraordinary about the employment of the national credit; it ought to be just as much a regular system of supplying the needs of the state as is taxation. Only taxation is for regularly recurring expenses, while a loan is for permanent and irregularly occurring expenses.[2] He even went a step further in favor of the use of credit when he said, " Increased taxation is rather to be employed as an exceptional means of aid in times of need if, on account of deficiency in credit or its great depression, further use of credit becomes impossible or seems inadvisable." [3] Dietzel seems not to have realized that increased taxation in the face of increased loans was absolutely necessary to maintain public credit. We have seen how the Central Powers had to face a financial crisis during the late war because they disregarded this truth. But of this, more later.

The same writer rightly opposed Adam Smith and others who thought that taxes are paid out of income while loans are paid out of capital. He also claimed that they held a one-sided view of productivity. In his opinion, as he has

[1] Dietzel, *op. cit.*, pp. 145-46.

[2] *Ibid.*, pp. 153-54.

[3] *Ibid.*, pp. 153-54.

described it (on pp. 148-149 of his book already referred to), the capital resources of the state consist of "immaterial conditions" as well as material things, so that what the state spends for these "immaterial conditions" is just as productive as are private expenditures for productive enterprises.[1] What Dietzel said would have been very true if he had included in his "immaterial conditions" only those state activities which are now recognized as truly productive, but unfortunately, he went to great extremes in including war as a productive activity. According to Dietzel, to manufacture war supplies in time of war is just as productive economically as to manufacture silk goods, carriages, etc., because the former goods are valued most for the time being; and the consumption of those war materials is also productive, because it satisfies the need of the state to protect itself.[2]

Contrasting the systems of loan and of taxation, this writer favors the former for the reason that it satisfies two great requirements in times of emergency, viz., (1) the raising of large amounts of capital, and (2) the raising of it quickly.[3] So far he was quite correct, but he erred when he deprecated the use of taxation in time of emergency, as (1) resulting in forced loans without interest payment, when only richer classes are made to pay by way of an extraordinary tax, and (2) bringing hardship to poorer classes and necessitating private borrowings, even if ordinary principles of taxation are used.[4] And he mentions, correctly, such disadvantages of private individual loans as greater competition, less credit, higher interest charges, etc. According to him, high taxes discourage thrift and the accumulation of capital, while national loans stimulate them.[5] Dietzel's ideas here

[1] Dietzel, *op. cit.*, pp. 159-60.

[2] *Ibid.*, pp. 166-67.

[3] *Ibid.*, p. 169.

[4] *Ibid.*, pp. 170-171.

[5] *Ibid.*, p. 176.

are only true if taxes alone are resorted to and if those taxes are extremely heavy.

Concerning the plight of the laboring classes in relation to public debts, Dietzel is opposed to the views of Mill and Chalmers. He believes that working classes are benefited rather than made to suffer by loans, because the state will spend the greater part of the capital borrowed as wages to the working class.[1]

Dietzel was again correct when he maintained that an incontestable advantage of the system of national loans is that it makes possible the use of foreign capital. This advantage manifests itself in two ways: (1) The quick concentration of the large amount of capital needed for an undertaking; and (2) the enlivening of the domestic political economy by the aid of foreign capital. By this means the nations may come together into a world-economy by uniting their powers and by the exchanges of the means of production. The benefits are mutual, that is, they accrue both to the lenders and to the borrowers, because the former are given a possibility for an unlimited formation of capital and for their investments. It is to be regretted that Dietzel, who so clearly recognized the close economic ties among nations, should advance a theory that war activities, which are most unproductive to all concerned could be productive. No thoughtful economist will doubt today that even a victorious war, considered from a nationalistic point of view and in the light of its immediate effects, is not economically favorable to a nation unless most improbable conditions are assumed, viz., that the war is of short duration and is not costly and that the vanquished nation is so opulent that a huge indemnity can be obtained from it. In recent history, only in the Franco-Prussian War of 1870 did a nation stand in that exceptional position. If there are any converts to the Dietzelian theory of war

[1] Dietzel, *op. cit.*, pp. 177-178.

economics of recent years, their fond hopes must have been shattered by the experience of the late World War.

Dietzel was opposed to the contention that loans unjustly pass on the burden of the present generation to the future generation. He said that, provided the capital gathered by loans is not used up in wasteful expenditures, the loan is as justifiable as individual borrowing for the purchasing of machinery, for the improvement of land, and for similar purposes. Besides, the people of a nation considered as a whole has a continuous life, though individual members of it may come and go; therefore, no one generation consumes all the profits from any capital of the state which they contribute nor does it contribute any capital without drawing any profit from the same. We cannot, therefore, speak of the burdening of the future by the present.[1] Certainly we may agree with Dietzel here with regard to all those debts made for the purpose of lasting productive undertakings by a nation, but war debts and other debts contracted for what proves to be an unsuccessful undertaking, are burdens upon the future taxpayers, and should be repaid by the present generation of taxpayers. Of this, more will be said in a later chapter.

With reference to the utilization of those portions of capital that are liable to be wasted in individual economies, Dietzel expressed the following opinion: In a developed political economy where division of labor is complete, there is bound to be a disproportion of demand and supply in the capital and goods produced by individual economies because of the lack of information and direct coöperation among them. There is always, therefore, a certain amount of capital which is constantly produced and wasted. The concentrating of these scattered amounts of capital through national credit and the employment of them for national and social

[1] Dietzel, *op. cit.*, pp. 184-85.

purposes are the only means by which this capital can be made useful for the national economy. "Even if no necessary purpose should be present, nevertheless the taking over of such capital by the state is desirable, since the state can afford to be the first to venture in an investment from which the individual must stand off on account of the improbability of its success." [1] His last statement is contradictory to his former statements, and it is entirely opposite to the present theory of public expenditures.

Provided expenditures are properly made, to Dietzel all national loans mean more fixed capital, and consequently greater welfare for the state, and he makes this amazing statement:

> The greater the part of the total national expenditures the interest on the national loans amounts to, the richer the people and more blooming its political economy will be. . . . National loans which were assumed according to the true principles of national credit are no debts to the nation, but a capital of the nation.[2]

Dietzel only stated a half-truth, for if national loans were contracted for truly productive purposes, they could either be steadily repaid by taxation or would pay for themselves.

To Dietzel, as long as the people can easily pay the expenses of loans, they are and must be productive, and vice versa. In his opinion, therefore, loans are permissible as long as they do not grow so high that the interest payment becomes "an impossibility or an intolerable pressure" to the taxpayers.[3] As we have stated before, Dietzel seems to have disregarded the probability of national prosperity *in spite of* the unproductive loans. Following the same line of argument, this writer says that, in a less fully developed political

[1] Dietzel, *op. cit.*, pp. 188-90.

[2] *Ibid.*, pp. 200-201.

[3] *Ibid.*, p. 213.

economy, loans for unavoidable expenditures, such as for a war, ought not to be considered as an investment in fixed capital, because, on account of its low productive power, the state could not offer lasting profits proportional to the value of loans, and because the people could not pay interest on them.[1] According to Dietzel, then, a loan in a rich country even for wars is a good investment, economically speaking, because the country shows no ill effects from it and because the people can easily afford it; and the contrary is true in a poor country.

Finally, this writer maintains that if it is difficult to raise taxes for the payment of interest on war debts, and individual economy demands capital and can invest it profitably, war debts should never be paid, because the pleasure of being debt-free would be purchased at a dear cost. There is an element of truth in this idea, but, as we shall see in a later chapter, public debts ought to be redeemed for reasons quite different from those given by Dietzel. In Dietzel's opinion the extinguishment of the debt "for the mere purpose of making the state appear debt-free and relieving the individuals of paying more interest" is not an essential of the loan system, because "what makes it necessary with private credit — the guaranty of the creditors — is entirely lacking here." According to Dietzel, national loans are raised to bring about the production of new capital by the people, and to invest that capital in the common economy so as to become a basis for continual gain. Therefore, if they are to be extinguished, this will be for the same reason and for the same purpose, namely, in order to produce and to accumulate new capital. And he concludes:

The extinguishment, therefore, ought never to be regarded as a purpose, but only as a means to exert influence upon the con-

[1] Dietzel, *op. cit.*, p. 214.

dition of the capital. If no outstanding need for sums of capital is present in the political economy, the extinguishment of the debt is unjustified; for, if these sums of capital can find no profitable employment, if they — through competition — press down the interest rate below its natural average position, then national loans take away more from the political economy as a whole, in the form of taxes raised for their extinguishment, than they give back to it in new capital.[1]

We thus see that Dietzel based his entire idea of the system of national loan upon his far-fetched theory of national economy. On the particular question of redemption, his discussion only dealt with the question of the opportune or inopportune time of payment and failed to probe into the fundamental reason for or against the repayment of national debts.

[1] Dietzel, *op. cit.*, pp. 220-221.

CHAPTER II

Modern Theories

In the last chapter we obtained a general idea of the opinions of the more prominent writers of the past concerning public debts. In the present chapter let us trace some of the more representative opinions of present writers on the same subject.

Professor C. F. Bastable, who is one of the most distinguished English writers on public finance, maintains that public credit is only one form of credit in general, and is governed by the same fundamental principles which control private credit. If the resources obtained through public credit are not applied for economic production, there is proportional loss to the material power of the state. Such borrowing means reduced income in the future until the debt is paid. Just as an individual can only rightly borrow on the expected strength of his clear income in the future, so a state can only rightly borrow on the expected strength of its clear future revenue. And in a modern state, that strength, in the last analysis, depends upon the capacity of the people to pay taxes. As to the mechanism of public credit, the analogy, according to this writer, still holds. A state has to enter the money market and compete with private loan issues for the flotation of its issues. The rate of interest demanded by the creditors will depend upon their estimation of the government's good faith and financial strength.[1]

Although this general conclusion is amply corroborated,

[1] See C. F. Bastable, *Public Finance,* 3rd ed., pp. 658-59.

says Professor Bastable, and may be utilized in dispelling certain fallacies on the subject, there are some special features of public economy that impart to public borrowing certain peculiarities, especially in the case of the central government. He describes these peculiarities somewhat as follows:

In the first place, the sources of private wealth are in property or personal earning power; it is from them that all private incomes are derived. But the revenue of the state is, for the most part, derivative; that is to say the state can compel the individual tax-payers to provide the necessary funds. Borrowing is used, therefore, when heavy taxation is for the moment undesirable, and is the more desirable since public credit rests on a broader and more enduring foundation than private credit. In the second place, in public finance it is difficult to make a sudden retrenchment of customary expenditures. Therefore, when a deficit is foreseen, and new taxes are not for the moment available, borrowing is always necessary.[1] Thirdly, and most important of all, there is the peculiar legal position of a debtor state. Unlike all private persons, a state may declare whether or not it will fulfill its debt obligations.[2]

With reference to the last-mentioned peculiarity of public borrowing, however, Professor Bastable adds the following explanatory statement:

Though released from legal liability, the sovereign state is in practice under very powerful inducements to pay its way. In the first place, if its creditors are foreigners, a failure to fulfill its agreement lays it open to remonstrance on the part of the foreign States affected, and possibly to even more rigorous measures. . . . With regard to native creditors there is an obvious interest on the part of the state to do nothing that will injure them, and whatever political power they possess will

[1] Bastable, *op. cit.*, pp. 659-60.

[2] *Ibid.*

surely be used in their own defense. Stronger than either foreign or domestic influence is the economic sanction that protects the security of loans. The repudiating State shuts itself out from the future use of credit for the sake of a temporary gain. . . .[1]

Coming down to the subject proper, Professor Bastable says that if a public loan is contracted for an industrial undertaking, such as construction of railroads, its influence on the state economy may be imperceptible. Private enterprise might just as well do the work, and therefore, from the economic standpoint, a public loan is unnecessary. We cannot quite accept this opinion of Professor Bastable. What he says is true if we assume that all industries are carried on just as economically by private enterprise as by public enterprise. But often the contrary is the case. We must remember that in private enterprises there are often doubled or tripled expenses due to separate organizations and to competition; discriminatory freight rates (for instance) affecting other industries; over-production or under-production as the case may be, due to lack of coordination; the labor strikes arising from the payment of insufficient wages to the working-men; and so on. These we shall discuss more fully in a later chapter. Suffice it to say here that, in our opinion, the public loan for industrial purposes has become one of the most important subjects in public economy, and its economic consequences are far-reaching. The tremendous growth of public utilities in recent years is an outstanding proof of the existence of the differences in economic effects between public and private ownership.

Professor Bastable goes on to discuss the effects of loans applied for unproductive purposes, such as wars. Here a fund of capital is used in producing goods and services applied to acts of destruction. Of course this holds true

[1] Bastable, *op. cit.*, p. 661.

even when war expenses are met by taxation. We must therefore consider, says this writer, the effects that are directly traceable to public loans; and he brings out the following points:

(1) It is only partly true that the loan is made out of capital, while taxation is obtained from income. There is no clear-cut distinction between income and capital. For this reason, according to different conditions the public loan affects income as well as capital, and taxation affects capital as well as income. "Large public borrowing stimulates saving and thereby checks expenditure on enjoyments, while oppressive taxation reduces the fund from which new savings are made, and so far hinders the accumulation of capital." [1]

(2) A loan is responded to voluntarily while taxation is compulsory. The loan, therefore, puts less immediate pressure on the individual citizens.[2]

(3) "The equitable distribution of heavy taxation is not easily attained. Where very high imposts are laid, some classes and persons are likely to suffer unduly. The division of the charge over a longer period by the use of borrowing makes the proper apportionment of the burden far easier, and more especially allows of sufficient time for its full consideration." On the other hand, some urge that the policy of paying all expenses out of taxation checks the government from indulging in extravagant and wasteful outlay.[3]

Finally, Professor Bastable enumerates his general conclusions:

On the whole, then, the rules applicable to the treatment of abnormal outlay for other than economic purposes may be

[1] Bastable, *op. cit.*, p. 673.

[2] See *ibid.*, p. 674.

[3] See *ibid.*, pp. 674-75.

stated as follows: (1) Expenditure should, as far as possible, be met out of the annual receipts, and therefore increased outlay should be balanced by heavier taxation. (2) In the case of non-recurrent expense of large amount, a loan is preferable to a serious disturbance of the normal tax-system, and may fairly be employed. (3) Where the abnormal expenditure extends over a series of years, the various forms of taxation should, speaking generally, be adjusted to meet it. (4) This general principle, however, fails where either (a) it would be impossible to secure an equitable division of the heavy taxation necessary, or (b) where the limit of productiveness with regard to the several taxes would have to be exceeded, or finally (c) where for political reasons it is inexpedient to press heavily on the tax-payers. Under any of these conditions resort to loans as a supplement to the tax revenue even for a somewhat lengthened period is defensible.[1]

Professor A. C. Pigou discusses public loans in a more specific way than Professor Bastable. In Part 4, Chapter VIII of his book "Economics of Welfare", he discusses the comparative effects of taxes and loans on the national dividend. He argues that it is clear that, under either system, to the extent that the funds required are obtained from consumption (in excess of what is needed for efficiency) or from the formation of new resources (without decreasing the efficiency of the people or machinery employed), the national dividend of the future is not adversely affected. But to the extent that they are drawn from any other source, the future national dividend is damaged "to the full extent of the interest loss which the depletion of the capital implies." The first problem that confronts us, therefore, is to determine how great a difference the choice between the loan system and the tax system makes to the source from which the funds obtained are in fact drawn.[2] For the sake of clearness it

[1] Bastable, *op. cit.*, pp. 678-79.

[2] See *supra*, p. 647.

must be remarked that in either system "the extent to which the various sources are drawn upon will be affected by the nature of the cause which renders the raising of the money necessary." If the government thereby enters upon some profitable (that is, productive) enterprise the people will neither economize in their expenditures nor make extra exertions to provide the money, because they expect lower taxes in the future. On the other hand, if the cause of the need for fund is a war, the people will economize more and work harder, because there is neither lowering of tax nor increased social income in sight. Thus far, the effect is the same whether money be raised by loans or by taxes.

Now, one of the reasons why differences in the effects are brought about, according as one or the other method is used, is the fact that the people overvalue the benefits of the interest they are to receive on their bonds and undervalue the sacrifices (that is, taxes) they have to make in the future to pay off public debt. So the result is that they do not, under the loan policy, economize in their consumption, nor do they make increased exertion. (Here, Professor Pigou seems clearly to overemphasize the human instinct of fear, yet almost to disregard the other instinct of the love of gain, as stimulating to economy and to greater activity.) In the second place, the taxes have never been high enough to absorb all the interest accruing to government bonds held by the wealthy class. Therefore, the rich are less likely to curtail their expenditures or to exert themselves more. The result is a diminution of the future national dividend. In the third place, concerning future taxes for the purpose of debt payment, we know that these taxes, being long-enduring, are foreseen; and the expectation of them must tend to check production and injure the national dividend, as long as they last. It is clear, then, that in several ways, "the levy of any given sum of money by a loan is likely to prove more

injurious to the national dividend of the future than the levy of an equal sum by taxation."[1]

"However," says the same writer, "caution is required before they are applied to the controversy between advocates of loans and advocates of taxes as a means of financing war."[2] In his opinion, since wars may last for a number of years, the tax method will reduce the exertions of the people insofar as they think "a large part of the fruit of any exertions they may make will be absorbed by the state." On the other hand, there is a point in favor of tax policy in that "the tax plan will cause the people actually living and working at the time the expenditure is being undertaken to contract their consumption and to increase their productive efforts to a greater extent than they would do under the other plan."[3]

Professor Pigou finally comes to this rather ambiguous conclusion: "Hence, we conclude generally that, from the standpoint of the national dividend, and apart altogether from political difficulties, taxation affords a *somewhat* better method than loans of raising money for emergencies. *How much* better it is, it is not, of course, possible to say."

In Chapter IX of the same book, Professor Pigou unsuccessfully attempts to refute Professors Seligman and Scott and comes to a more definite conclusion that, from the standpoint of a sound distribution, a great war ought not to be financed predominantly by loans, the interest on which will afterwards be met by ordinary taxes. Rather a large part of the costs should be met by taxation levied at the time, on principles such as to lay a far greater part of the burden on the wealthy class than is usual under ordinary forms of taxation.[4]

[1] Pigou, *op. cit.*, p. 647.

[2] *Ibid.*

[3] See *ibid.*, p. 652.

Doctor Hugh Dalton is another prominent authority on public finance in Great Britain. With reference to a foreign debt, Dr. Dalton believes that its real burden depends upon the way in which that burden is distributed among the people. If the required money payments are made mainly by the rich, the burden will be less than if they are made mainly by the poor.

Putting it another way, the money payments are used by the external creditors to obtain goods and services, which would otherwise have been at the disposal of members of the debtor community. The latter are, therefore, deprived of goods and services to this amount, and the amount of direct real burden will depend on the way in which this deprivation is distributed.[1]

According to this writer there will be a direct and real burden of internal debt if the share of the burden of taxation borne by the rich is smaller than the proportion of public securities held by them. There will be a direct real benefit if the burden shared by the rich is larger. But as a matter of fact, in nearly all modern communities, owing to a vast inequality of incomes, public securities are held for the most part by the wealthier classes. On the other hand, taxation, no matter how progressive, is seldom so sharply progressive as to counterbalance among the rich classes the incomes which they obtain from public securities. In almost all cases, therefore, an internal debt also involves a direct and real burden.[2]

As to the indirect burden of a foreign debt, Dr. Dalton maintains that it arises from the check to the productive power of the community, due first to the taxation necessary for the payment of debt charges, and second, to the probable check to public expenditures which would promote production.[3] Internal debt involves similar indirect burden.

[1] Hugh Dalton, *Public Finance*, p. 189.

[2] See *ibid.*, pp. 191-92.

[3] See *ibid.*, p. 190.

One reason for this is that the taxation required for the service of the debt tends to check production, insofar as it reduces taxpayers' ability and desire to work and save. Another reason is that short-sighted 'economies' in desirable social expenditure, which also tend to check production, are particularly likely to be made when heavy taxation is required to meet debt charges.[1]

Dr. Dalton believes that taxation will probably reduce personal efficiency more than the receipt of debt charges will increase it. "There would thus be a net loss in ability to work, while ability to save would be unaffected by the transfer of income." He also believes that the assured yearly income to the bondholders will tend to reduce their desire to work and save.[2] However, as Prof. Bastable has stated, much depends upon the amount of taxation as well as the particular kinds of funds affected by the taxes, and therefore, we cannot accept Dr. Dalton's statements without some reservations. These we shall discuss in a subsequent chapter.

With regard to war debts, Dr. Dalton gives us a clear exposition of their evil economic consequences to the following effect: It is a peculiarity of a period of war that the general level of prices and the rate of interest are unusually high. The former is due to reduced production coupled with the increase in paper money; while the latter is due to the shortage of capital combined with a large government borrowing. As prices fall, after the war, the amount of real wealth corresponding to a given money payment increases. Hence, when interest is paid on public debts, the transfer of real wealth from taxpayers to public creditors increases, and therefore, both the direct and the indirect burdens of the debt increase. Again, as the rate of interest falls, the prices of all public securities rise, and the money cost of repayment of

[1] Dalton, *op. cit.*, p. 192.

[2] See *ibid.*, p. 194.

a given amount of principal increases. Here again, therefore, the direct and the indirect burdens of the debt increase. If the fall in prices and the rate of interest occur simultaneously, the burden is so much the greater.[1] Dr. Dalton therefore favors "straightforward taxation as the chief means of financing war."

On repayment of public debts, the same writer expresses the following opinion: The rate at which a foreign debt should be paid off depends upon the wealth of the debtor community in relation to the amount of the debt. If the wealth of the debtor is great and the amount of the debt small, the debt should be repaid faster, and conversely. The rate at which an internal debt should be repaid depends upon different considerations, because here the repayment involves, not a diminution of wealth, but merely a transfer of wealth within the community. Here there is a good reason for rapid repayment regardless of the wealth of the community or the size of the debt. Indeed, in contrast with the case of an external debt, the argument for rapid repayment is stronger, the greater the burden of the debt, which means, in general, the greater its size.[2] If the debt is repaid slowly, the burden of interest payment will decrease slowly, while there will also be a long-enduring burden of sinking-fund payments. The probability is, therefore, that there will be a long-continued check to productivity and to beneficial public expenditure. If, on the other hand, the debt is paid off rapidly by means of a special but short-lived taxation, the burden of interest payment will diminish rapidly, while the additional burden due to taxation for repayment will not last long. The check to productive power of the community and to beneficial public expenditure will, therefore, be removed within a comparatively short time.[3]

[1] Dalton, *op. cit.*, pp. 194-95.

[2] *Ibid.*, pp. 201-202.

[3] See *ibid.*, p. 202.

Professor H. C. Adams, in his "Science of Finance", states that public credit is the source of *anticipatory* revenue as contrasted with revenue that is direct or *derivative,* and every question that arises concerning it must be judged in the light of this fact. Moreover, industries and taxation are almost always limited in their view to the ordinary and ever-recurring fiscal needs of the state, while credit, correctly employed, offers a means to obtain a fund for some unusual object or to meet a demand of an unusual amount. In his opinion, therefore, if any state resorts to public credit for other purpose than to anticipate an orderly income in the future, it will sooner or later face a serious financial difficulty.

> The industrial effect of public borrowing, therefore [says Professor Adams] must show itself in the fact that capital which might develop or sustain industries under the direction of private control is taken over by the state; and if, . . . the capital borrowed is put to a non-industrial use, it is evident that the demand made by the state for funds through the placement of its bonds will disturb the orderly development of industry, if indeed it does not check that development or proceed so far as to cause the fall of industries already established.[1]

The same writer discusses loans for emergencies somewhat as follows:[2] When a government faces a sudden emergency, it is justified in resorting to a loan at least to bridge over the period between the levy of new taxes and the time at which those taxes yield sufficient revenues. The reasons are: (1) The government needs a large extra fund immediately. But it takes a considerable time before new taxes become remunerative, — at best it takes many months, and at the worst it takes many years, and they become remunerative when the emergency pressure is gone. (2)

[1] H. C. Adams, *Science of Finance*, pp. 520-21.

[2] See Adams, *Public Debts*, pp. 83-85.

The evils arising from a sudden great increase in the rate of taxation more than counterbalance the benefits. Indeed, we should always bear in mind that the expenses of wars or other emergencies are ultimately to be paid through the instrument of taxation. For an emergency, however, this instrument cannot be immediately and wholly relied upon. In any permanent system of taxation among modern nations, it usually happens that the rates of many taxes are so fixed as to yield the greatest possible revenues under the existing conditions. Therefore, a sudden increase in rate does not increase revenue; it may even cause a decrease in revenue. There are other taxes which are more elastic and which may be resorted to for the purpose of immediately increasing the revenue: for instance, excise or tariff. But the merchants, traders and manufacturers are much disturbed in their business calculations, and that may cause a decrease in production, not to mention a sudden rise in prices. Therefore, a violent change in the rates of even these taxes is inadvisable.

As to the method of financing public works,[1] Professor Adams, assuming that a certain public work is justified, believes the only economical method of raising a fund for its completion is public borrowing. Taxes could never secure a large enough fund within the time in which the work should be completed. The work should be done without interruption and within as short a period of time as possible, because every delay means the loss of the benefit derivable from the capital already invested, as well as the loss due to the damage usually sustained by any half-finished work. One might ask, why not raise the necessary fund by an extraordinary tax if that were possible? Professor Adams' answer is as follows: (1) That such a tax seriously disturbs the business relations of the community, (2) that it runs

[1] Adams, *op. cit.*, pp. 95-99.

counter to one of the fundamental principles of public finance, viz., that a sound revenue system should be stable. The shock and the burden of a sudden tax are better replaced by a loan which distributes both of them more smoothly over a period of years. Moreover, in the last analysis, heavy taxation cannot eliminate the element of loan from the community. Except for the small contribution by way of diminished personal expenditures, the tax for the most part is derived from employed capital. Now, in order to replace that portion paid out as taxes, business men must borrow from the possessors of free capital. Therefore, from the standpoint of the general welfare of the community, if the government can contract a debt on better terms than private persons, government borrowing is much to be preferred.

Professor W. M. Daniels[1] believes that it is doubtful whether any formula — that is, a rule telling the financier when to resort to public debts — can prove of much real assistance. He doubts the importance of Professor Adams' classification.[2] In his opinion, since interest is paid to the public creditors out of current taxation, the merit of any particular borrowing can be decided only by weighing the benefits accruing from the proceeds of the loan and the sacrifice (that is expressed in higher taxes) and comparing the two. But such benefits are often very imperfectly measurable in money terms. The inference is, therefore, that the economic effect of a particular public debt is to that extent indeterminable. Professor Daniels' criticism does not seem to us quite well-founded. A precise measurement of the economic effects of a public loan, if possible, is certainly very desirable and very useful. For our practical purposes, however, it is not essential in determining the

[1] See his *The Elements of Public Finance*, p. 295.

[2] On pp. 78-101 in his *Public Debts*, Prof. Adams maintains that loans may be used to cover a temporary deficit, to meet a fiscal emergency and to meet demands arising from public works.

financial policy or in giving judgment upon its general economic effects.

We have thus far reviewed the opinions of the several writers on the general questions of public loans, and these necessarily have been expressed in but little more than summary statements. We now come to a writer who gives us an exhaustive discussion of a specific phase — perhaps the most important one—of public loans.

In Chapter XXIII of his "Essays in Taxation", *Professor E. R. A. Seligman* discusses the question of "Loans versus Taxes in War Finance".

The fiscal problems of the war, [says this authority,] may be divided into those of a general and of a specific character. War expenditures can be met in three ways: by taxes, by loans, or by paper money. The specific problems have to deal with the nature and the details of each of these expedients; the general problem is concerned with the principles that underlie the preference among the respective methods. Inasmuch as paper money is by common consent to be regarded as the last resort, the general problem at issue here pertains to the choice between loans and taxes and the relative proportions in which each is to be employed.[1]

Professor Seligman then goes on to tell us of the changes in the method of war financing between the past ages and the present. Speaking of the financing of the World War, he brings out the fact that by far the greater part of war expenditures were met by the belligerents through loans, the proportion raised by taxation ranging from 17% in Great Britain to zero in France. He asks: in spite of suggestions by economists and others that the war cost be met by taxation, why did the belligerent governments follow the loan method primarily? In answering this question, Professor

[1] Seligman, *Essays in Taxation* (9th ed.), pp. 715-16.

Seligman first raises and answers the question, "What are war costs?"

> It is obvious, [says Professor Seligman] that a distinction must be made between the money costs and the real costs of a war. The *money costs* of a war are the actual outlays of the government for war purposes, that is, the surplus above the general expenditures in time of peace, making due allowance for changes in the purchasing power of money. . . . The *real costs* of a war are to be measured by the diminution of the social patrimony and by the diversion of current social output from productive to unproductive channels, i. e., by changes both in the fund of accumulated wealth and in the flow of social income.[1]

But, says the same writer, in order to go to the root of the nature of real costs, we must analyze further. He analyzes them into two elements, objective and subjective. By objective costs he means the sacrifice or pain of physical and mental exertions, and abstinence, or the foregoing of enjoyments. The real wealth of a community depends upon net sacrifices, or, net subjective costs. And by net subjective costs Professor Seligman means the exertions and abstinences which are over and above those economically worth while to make. The important criterion in the economic welfare of a community is, therefore, the net subjective cost or sacrifice. "This is as true in war as in time of peace."[2]

Now, applying this idea to war, Professor Seligman continues:

> The true costs of a war are the net sacrifices or subjective burdens which result from the transition from a peace economy to a war economy, and which are connected with the fundamental

[1] Seligman, *op. cit.*, p. 717.

[2] See *ibid.*, p. 720.

processes of production and consumption. They consist, on the one hand, of all thos efforts involved in the transfer of enterprises and investments from the ordinary channels of production to the new fields of primary importance in the war. They consist, on the other hand, of all those efforts involved in the reduction and the change of consumption which will serve to counterbalance, in part at least, the inevitable reduction of social output. The net result measured in terms of aggregate sacrifice or subjective cost constitutes the real burden of a war. The problem that confronts us is to analyze the results of various fiscal expedients upon these changes in production and consumption from the point of view of the subjective costs or the real burdens resting on society.[1]

Professor Seligman then raises the question: Can war costs be diminished in the present or be shared with the future? And he answers: — Except for certain limitations and exceptions, the objective costs can neither be diminished nor shared with the future, because the commodities and services are now produced and now consumed. The exceptions and limitations are such things as (a) the using of fixed capital without adequately providing for its upkeep, thereby causing deterioration of the plants, the machines, etc., (b) the capital fixed for war purposes only, leaving so much less capital after the war, (c) overworking of labor, resulting in less energy and efficiency after the war. When it comes to the subjective costs, however, the situation is quite different. Subjective costs may be reduced without shifting any of the burden to the future, or they may be partly diminished and partly shifted to the future. Obviously, neither of these consequences are obtainable by the method of taxation, — the reason simply being that the present taxpayers bear the burden, although the future taxpayers may also bear some burden.

[1] Seligman, *op. cit.*, p. 720.

"Is the same true," asks the same writer, "in the case of loans? Are the subjective costs or sacrifices of the community in any way lessened by government borrowing? This brings up for consideration the theory of public credit."

Professor Seligman then proceeds to discuss private and public credit. The use of private credit for productive purposes, that is for business enterprise, diminishes the individual's subjective sacrifice for the obvious reason that he expects a future profit. But even a private credit for the purpose of consumption diminishes the individual's subjective sacrifice because of his underestimating the future and because of the possibility of gradual repayment. "The social utility of credit is therefore quite clear. It increases the wealth of the community by lessening the subjective sacrifices of certain individuals and putting at the disposal of the community funds where they will be utilized to the greatest advantage, thus decreasing costs and increasing output."[1]

After discussing the differences between private and public credit the same writer says that all the advantages of private credit hold true of public credit. On public credit, he says:

> Its utility consists in the fact that, through borrowing from those in possession of the capital rather than taxing all the members of the community, whether or not they have the capital, it lessens subjective costs or sacrifices and puts at the disposal of the government those services in the community with which it can most easily dispense.[2]

Why cannot taxes take up that same capital? he asks; and then he answers, "In order to invalidate this statement it would be necessary for the government to take by taxation from each individual absolutely everything above the necessary means of subsistence. Only then would this

[1] Seligman, *op. cit.*, p. 724.

[2] *Ibid.*, p. 726.

particular argument as to the advantage of loans over taxes lose its force." [1]

Professor Seligman further proves that this diminution of subjective costs of the community may lead to greater social production, or, what is the same thing, to a decrease in objective costs to society. Then he says, "If, then, it is true that the utilization of public credit may involve a lessening of subjective costs or real burdens upon the community, can it in the second place accomplish this by transferring a part of the burden to the future?" [2] After proving the fallacy of the contention that the sacrifice imposed upon the future tax-payers is counterbalanced by the benefit to the bondholders, Professor Seligman says, "We may, therefore, consider it as established that it is possible, not only to diminish the subjective sacrifice on the present, but also to put a share of the burden upon the future. It has also been established that the device of public credit necessarily accomplishes the second result in effecting the first." [3]

Finally, this writer asks: "Ought the burdens of a war be shared with the future?" After analyzing and comparing the various sorts of government expenditures, he maintains that war expenditures should be classed as recurring, extraordinary expenditures, and comes to the following well-balanced conclusion:

The conclusion, therefore, would be that in the case of a great war it would meet all the demands of justice to put part of the burden upon the present tax-payers and to shift the remainder upon the tax-payers of succeeding years, with the understanding that all the charges of the war will finally have been met before the period when the recurrence of a similar outbreak is within the realm of probability. This conclusion in other words

[1] Seligman, *op. cit.*, p. 726.

[2] *Ibid.*, p. 729.

[3] *Ibid.*, pp. 731-32.

shows the essential legitimacy of utilizing both loans and taxes in times of war.[1]

Professor Carl C. Plehn expresses his fundamental conception of public loans in a summary way, as follows:

Much attention has been given by different authorities on public finance to the economic effects of public borrowing. The consensus of opionion is that public borrowing does not, as was once taught, create new wealth except indirectly, through the use made of the capital taken when it is used productively. Nor, on the other hand, does public borrowing in itself directly destroy wealth. The money borrowed may be devoted to some form of rapid consumption, as in war. In this case the destruction of wealth is determined by the line of expenditure decided upon, not by the borrowing merely. . . . As in the case of a spendthrift who mortgages his patrimony for wasteful extravagance, so in the case of a nation which borrows for war, the evil that arises is from the waste of war, not from the borrowing. For a state to borrow for a productive purpose has no other economic effect than for a private corporation to do the same.[2]

On the difference between public and private debts, *Professor M. H. Hunter* tells us that in private enterprise the squandering of funds or failure of the undertaking, frequently means the inability to meet liabilities. In the case of a state, however, liabilities can be met from the general taxing power. As long as taxes can be secured, the interest and the principal of debts can be paid. The ability of an individual to meet a liability depends upon the success of his particular industry, while the ability of the state to meet liabilities depends upon the success of industry in general. It is because of this broad patrimony that the state is often able to secure funds on better terms than individuals.[3]

[1] Seligman, *op. cit.*, p. 736.

[2] See Carl C. Plehn, *Introduction to Public Finance*, 4th ed., p. 349.

[3] See M. H. Hunter, *Outlines of Public Finance*, p. 391.

The same writer believes it is among the advantages of borrowing as against taxation in financing a war that the people feel less hurt; and also that idle capital can be utilized more quickly and to a fuller extent.[1] On the disadvantages, he says that borrowing increases the cost of war in a two-fold manner: (1) Government has to pay higher prices for goods, (2) people have to pay higher prices for commodities. The reason for this is the increase in the purchasing media. Increased prices work hardship on the people of fixed incomes, i. e., on wage-earners in general. On this last point, a word should be said as to the validity of Professor Hunter's opinion. As we shall see in a subsequent chapter, although public borrowing is almost always followed by inflation, this is not the necessary consequence of public borrowing. If public loans were made from the real savings of the people, inflation need not follow at all. But of this, more later.

Professor Hunter further believes that public borrowing does not shift the burden of war to the future. "There is no question", says he, "but that war entails a burden upon the future — the sinking of battleships and merchant marine, the destruction of factories, cities, mines, railroads, and agricultural lands, which otherwise would have been handed down to posterity, is conclusive evidence that war places a burden upon the future. The contention, however, that the burden may be shifted has, in reality, no foundation. In only one way can this be possible." And he mentions foreign loans.[2] "It is impossible to eat one's cake and have it too — one cannot spend his money for goods and at the same time turn it over to the government to purchase war materials." [3]

[1] Hunter, *op. cit.*, p. 449.

[2] See *ibid.*, p. 452.

[3] *Ibid.*, p. 453.

True, it is incontrovertible that the material burden of the war — taking the nation as a whole — cannot be shifted. But, as Professor Seligman ably contends, its 'psychological burden' can be shifted to the future. A person going through a surgical operation today cannot 'shift' today's loss of blood; but through the use of anesthetics his pain can be shifted to the following days. The shock at operation might have killed him. And so it seems with loans, as against excessive taxation, in war time. Assuming that future burdens are distributed equally, to a cold mathematical logic there is nothing more absurd than to insist that it is more soothing for a person to give up all the future income of a thousand dollars as an increased share of future taxation than to give up those thousand dollars now and be free from that future increase in taxation. Yet that is precisely the situation when we take the people as a whole. Whatever the government borrows today, we have to provide from today, and we only receive in return a "shadow" of claim called bonds. But our present and our future incomes are diminished to the extent that our government shoots them off from the mouths of cannons. (We have assumed that future taxes are to be distributed equally. To the extent that the wealthy classes bear relatively less burden than the poorer classes, they gain more under the loan policy than under the taxation policy.)

However, taking human nature as it is, in a period of war when every encouragement must be given to increased production, it were perhaps wiser for a practical financier of a nation to preserve the people's optimism even though it may be based largely upon illusory thinking. In this connection it is interesting to notice that a large part of that optimism is, consciously or unconsciously, based upon the expectation of victory, for no nation would enter a war if it were sure of defeat.

Professor Hunter seems to be an ardent theoretical supporter of the taxing policy instead of the loan policy. His statements under the heading "Exaggerated Objections" are admirable.[1] But he recognizes the practical difficulties of exclusive reliance on taxation.[2]

In the opinion of *Professor N. G. Pierson*, whenever, at the time of its flotation, no proper measures are adopted to insure the redemption of a loan, that loan is *permanent*. On the other hand, if, at the same time with the issue of loans, taxes are increased or expenditures are reduced to such a degree as must automatically effect the repayment of the loan at the end of a certain period, that loan is *temporary*, even though it should take the form of a long-term debt.[3] He maintains that permanent loans should only be contracted for the purpose of such expenditures as are certain to yield revenues amounting to at least the interest on the loans. If a more liberal policy be pursued in the use of permanent loans, there results a chronic deficit, and a chronic deficit is a chronic evil, constantly increasing and resulting in a steady growth of taxation.[4]

On war loans, Professor Pierson gives us the following admirable view:

> The mistake usually made by public financiers in time of war has not lain in having recourse to loans. That was no mistake; it was necessary. It would be all the more necessary in these days, for the cost of a war is far greater than it used to be, and could not possibly be defrayed at once by means of taxation. Where the mistake lay, was in not at once devising measures for extinguishing the debt within a certain number of years. . . .

[1] Hunter, *op. cit.*, p. 456.

[2] See *ibid.*, pp. 458-61.

[3] N. G. Pierson, *Principles of Economics*, English translation, vol. ii, pp. 607-8.

[4] See *ibid.*, pp. 608-9.

Each generation should bear its own burdens, in order that the National Debt may not swell to extravagant proportions. If the burdens are distributed over a certain number of years the fulfillment of this requirement becomes possible.[1]

According to this writer, what has been said concerning war cost is also true of other extraordinary expenditures. Schools for large towns mean annually recurring expenditures. In small towns and villages they are truly extraordinary expenditures, and therefore can properly be met by loans. "What must be avoided is the spreading of the debt over too long a period." Again, if ultimate advantage is considered, it is much more preferable to issue bonds at par, because by so doing both conversion and redemption can be made more easily.[2] In cases of small loans or where the future generation gains increasingly greater benefit, the annuity system (that is, the system in which payment is the same year after year until the debt is extinguished completely) is harmless. However, for large loans, the yearly redemption of the largest possible sums is much to be preferred, for thereby the burdening of future generations is avoided.[3]

Professor Pierson, contrary to Adams and others whom he refutes, advocates the system of obligatory periodical payments as offering greater guarantee to the observance of debt repayment.[4] He opposes total extinguishment of debt by increased taxation because the benefits to be derived are remote, and present sacrifices are great. For countries of poor credit, however, where high rates of interest are paid, the endeavor to repay the whole debt is advantageous in that

[1] Pierson, *op. cit.*, pp. 623-24.

[2] See *ibid.*, pp. 624-26.

[3] See *ibid.*, pp. 629-30.

[4] See *ibid.*, pp. 630-37.

it improves the credit of such countries and enables conversions. In countries of good credit it will suffice for this purpose to apply surpluses of prosperous years.[1]

Leroy Beaulieu believes that public borrowing is in itself neither good nor evil; "or rather", says he, "we should frankly say, the ability for a state to contract debts is a good, an incontestable good." The public credit is a respectable power and is useful like private credit, but it is a power which can be abused. Beaulieu, however, refutes the idea that internal debts are under any circumstances not harmful. He explodes the sophistry of Voltaire and Melon, somewhat as follows:

This is how one can demonstrate the falsity of that sophism: it is very true that one of the consequences of public borrowing is to levy on the taxpayers by means of a tax a certain sum which is afterwards distributed to the bondholders for the claim of the interest. If the person held himself to such a superficial view of it, he might find that the state is indifferent to such things, as there is there no loss of the public fortune since certain nationals by the name of bondholders receive that which is paid by the other nationals by the name of taxpayers. These people expostulate that the nation itself would not be impoverished. But it is necessary to push the analysis further: Suppose no borrowing were done. The taxpayers would keep for themselves the surplus of the tax which is destined to pay the interest to the annuitants. On the other hand, the annuitants would have in their possession the capital which they lend to the state in the case of a loan, and, whether they should themselves put this capital to account or whether they should intrust it to some enterprisers or manufacturers, they would draw from it interest almost equal to that which the state pays when it borrows. Thus, in the case where a

[1] Pierson, *op. cit.*, pp. 637-44.

public loan is contracted, the annuitants acquire the interest of the capital lent to the state only at the expense of the taxpayers who pay them. In cases where no borrowing is done the taxpayers keep the money which they might otherwise have had to pay as tax to pay the interest on the borrowed sum: and the annuitants, having left in their hands and putting to account the capital which they might have lent to the state if it had borrowed, are not deprived of their interest. One sees the difference between the two cases: when there is a loan, one of the parties is injured; when there is no loan, each of the two parties—the taxpayers and the annuitants—has at its disposal the sum which in the case of a loan belongs only to one of them. To take up Melon's picture again: when there is a loan the right hand, that is to say the taxpayer, passes its money to the left hand, that is to say the annuitant; where there is no loan, each of the two hands rests completely, which is preferable.[1]

Beaulieu's above argument does not hold in one particular case, and that is when the loan is made for a purpose directly contributing to the productive capacities of the taxpayers, so that they are more than compensated for their increased burden of taxation. Loans for public utilities are examples of such a case.

This same writer contends that public borrowing is useful if it is for the purpose of public works such as railroads, canals, ports and establishments of public instruction; if the government brings into these enterprises some standard and judgment; and if the works have been judiciously selected and executed with economy.[2] If, on the contrary, the capital which the state has borrowed and which the annuitants have parted with is wasted in the pleasures of the court, in

[1] See Leroy Beaulieu, *Traité de la science des finance*, 8th ed., vol. ii, pp. 227-28.

[2] See *ibid.*, pp. 228-29.

It is incontestable [says Beaulieu] that the public loans have been, from this point of view, means of initiation. In all the civilized countries the inhabitants of the rural districts and in general the thrifty men of the lower class have had and still preserve some habit of distrusting the investments in securities. They are afraid to let go of their savings; they dare not lend to the companies whose conditions of existence they do not know, nor to the individuals whose solvency they suspect. Also they bury their savings in some hiding places and leave them most often unproductive. The public loans—above all, those which are put in circulation through the process of universal subscription—break through these habits little by little. As the state is the only personage of a country whose solvency everyone might *grosso modo* esteem, the most timid people concluded by daring to lend to it. Then, after having thus familiarized themselves with the securities, they feel less dislike for them. From the annuities of the state, they pass to the securities of municipal loans, and to the securities of the railroad companies. It is thus that public loans have served in Europe as initiators to the credit of the joint-stock societies and of the collective enterprises. . . .[1]

In spite of all this, the writer says, however, that the repeated issues of great public loans have, with time, given them a bad direction. The more a country borrows, the more the credit is concentrated in the capital city or the seat of principal exchange of the country. There is thus produced a centralization of capital which peculiarly harms local enterprises. The people complain that the savings of the rural communities are absorbed, as soon as they are created, by the public loans which dissipate them often in pure waste, and by such companies as the Land Trust of Paris, which employ them in constructing luxurious buildings in the cities. It is so much lost, they say, to agriculture, to the fecundation of the soil, to the production of the

[1] Leroy-Beaulieu, *op. cit.*, pp. 231-32.

necessaries of life. For this reason, many persons in France have come to believe that the expansion of public credit is an evil. Although there is a great deal of truth in these recriminations, says Beaulieu, the cause of these is not the public credit itself; it is its excessive concentration and the intemperate abuse of the national loans. Public credit, when correctly used, has permitted a great number of collective enterprises which have profited the whole country and especially the rural districts, in particular the network of lines of communication.[1]

Although Beaulieu has great confidence in public loans, he is not oblivious to some of their unfortunate results. He recognizes that the frequent public loans save capitalists from the necessity of seeking a useful employment for their capital, and thus tend to check their spirit of enterprise. He also admits that public loans have always resulted in raising the rate of interest in the country by diminishing its disposable circulating capital, which in turn has increased production costs of industries, reduced the profits of the merchants, and rendered difficult the creation of great works of public utility by the individuals or by joint-stock companies.[2] (This writer proves the point by French statistics.) In a country which issues large loans, it is probable that the fixed capital will be less well maintained than if the loan had not taken place. Whether there is a compensation for this reduction of circulating capital and this impoverishment of fixed capital depends upon the use which is made of the capital borrowed. However, says Beaulieu, the diminution of the circulating capital in a country is ordinarily less than the sum borrowed for several reasons: (1) public loans always stimulate saving to a certain extent; (2) large public loans always bring out of the safes, the writing desks, the straw

[1] See Leroy-Beaulieu, *op. cit.*, pp. 234-35.

[2] See *ibid.*, p. 237.

mattresses, and the old stockings, a part of the metallic reserve which is a country's dormant capital; (3) public loans are often subscribed to, to a great extent, by foreigners.[1] Beaulieu here refutes Condorcet's view that it is to be regretted if a national loan is subscribed by foreigners because the interest will be paid and consumed outside of the country:

> Indeed, if the interest goes out of the country upon its being paid, it should not be forgotten that the capital of the loan has entered the country. . . . This capital, it is true, could be wasted, —what happened in the past with many loans of the state. But it would have been equally so if the capital had been taken from the country, and then the means of production would have been reduced: while, if the means of production were not diminished, the revenue only would have been diminished. In supposing that a state must borrow, there is an advantage and not a disadvantage in what it borrows from outside, provided that it does not borrow at an excessive and ruinous rate. But it is very rare that a state can borrow from outside in a permanent manner and for a long duration.[2]

Beaulieu thus rightly contends that the foreigner comes to the aid of the nation which borrows, even if temporarily, and saves it from reducing its circulating capital as much as would have been necessary if that foreign aid had not come.[3]

He continues to discuss at length the influx of foreign capital as an indirect result of a large public loan. He proves by statistics that the reasons for this are: (1) national securities are popular among foreign capitalists, and (2) the securities of all kinds including foreign, fall in price because of the domestic monetary situation, and that therefore the

[1] Leroy-Beaulieu, *op. cit.*, pp. 239-40.

[2] *Ibid.*, p. 240.

[3] *Ibid.*, p. 244.

foreigners come to buy them up as much as they can. He says that the huge operation of the payment of five billion francs by France to Germany at the end of the Franco-Prussian War was effected through the working of this latter factor.

According to *Adolph Wagner,* government expenditures and revenues are divided into ordinary and extraordinary. Ordinary expenditures are those involved in maintaining legal protection and in promoting culture and welfare, etc., and they recur year after year. Ordinary revenues are those obtained generally from taxation. Ordinary expenditures must always be covered by ordinary revenues. Extraordinary expenditures are those occasioned by abnormal difficulties, such as wars. Extraordinary revenues are those obtained through national loans. Extraordinary expenditures are preferably to be covered by extraordinary revenues.[1] Nevertheless, says Professor Wagner, we cannot declare ourselves unconditionally for the utilization of the national credit to cover extraordinary needs, because the effects of taxes and of national debts on the position of individual economies and national economy can be different. It is evident that those means of reimbursement are most advantageous which work most favorably on the national economy in drawing commodities from the individual economies. Whether and how far such differences exist between taxation and debt assumption is still to be proved, the answer depending upon whether the law of applicability of national credit in the national finances has to experience more or less limitation against the position that all extraordinary expenditures—on account of their more lasting effects in themselves—might be covered by national debts.[2]

Professor Wagner then goes on to distinguish three kinds

[1] See Adolph Wagner, *Finanzwissenschaft,* 3rd ed., pp. 143-52.

[2] *Op. cit.,* p. 153.

of loans according to the kinds of capital from which they flow:

(a) Loans from truly disposable capital of domestic national economy; (b) loans from capital of foreign national economy [debt to foreign country]; (c) loans from domestic capital which are first drawn by loan from productive employment elsewhere in the home country. Always supposing that the loan is admissible for the kind of expenditures which have to be covered with it, in general, from the standpoint of the particular national economy, the loans of the first and second kinds may be preferred to taxation. On the other hand, conversely taxation must be chosen instead of a loan of the third kind.[1]

Even for the covering of extraordinary expenditures, this writer prefers taxation everywhere except where loans of the two above-mentioned kinds are possible, and when without such loans the capital might be wasted in bad undertakings or speculations.[2] He also prefers foreign loans to loans at home where capital is drawn from productive employment. The reason he gives is obviously that thereby domestic production is increased or at least its diminution is prevented. To Professor Wagner it is immaterial in this regard whether the proceeds of the loans were used productively or unproductively, for without such foreign loans, a corresponding diminution of capital, and hence of production, would take place at home.[3] We remember that Leroy-Beaulieu also was of this opinion. Although some writers seem to oppose foreign loans except in cases of extreme necessity, we agree with this broad view of Beaulieu and Wagner. Of this we will have occasion to say more in a subsequent chapter.

Professor Wagner reiterates the evil effects of loans obtained from capital productively employed. The capital-

[1] Wagner, *op. cit.*, p. 154.

[2] See *ibid.*, pp. 155-56.

[3] See *ibid.*, pp. 157-60.

ists, according to him, are induced to participate in the loan by the prospect of greater gain than they draw from the employment hitherto made of their capital,—the supposition of his discussion. A particular motive for real limitation of consumption, for greater thrift in order to form new capital, and for increased productive activity is not, there, fore, engendered in these classes by the loan, but perhaps it is by taxation. By loan, consequently, that part of the national income, or national wealth, which the state withdraws from the individual economies to cover its financial need is threatened to be transferred to the disposal of the state at the cost of the classes of people who possess no capital and who did not participate in the loan; above all, at the cost of the mass of the workingmen. By the equal taxation of all classes, the possessors of capital must bear their share of this burden and are spurred on to make good again this loss in income or capital, which the tax imposes on them, through suitable regulation of their consumption and their saving and through increase of their productivity.[1] What Professor Wagner says is generally true in practice, but theoretically it is not necessary for the poorer classes alone to bear the burden. If the increase in tax burden after and on account of the loan is equitably distributed, we could still retain all the advantages of the loan without bringing hardships on the poorer members of society. Those who are fighting against tax-exemption of national bonds have precisely this point in view. Of this, more later.

The same writer reverts to the question of the advisability of the actual use of national credit according to the particular kinds of extraordinary expenditures, and he says that war costs had better be met by taxation or foreign loans and in certain cases by loans which come from disposable capital of the domestic national economy; that the national economic

[1] Wagner, *op. cit.*, pp. 163-64.

capital investment, such as that for administrative reforms, etc., is also better covered by taxation because its favorable effects are not easily measurable; and that the private capital investments, that is, the investments for government-owned industries, are better covered by loans.[1]

Professor Wagner finally discusses the specific case of war loans. He considers that loans are very costly in war time because they have to be floated at high rates of interest; that loans sometimes do not suffice or are not contracted quickly enough; that therefore the precautionary measures which are to be taken for this purpose are the establishment of a national treasure (war treasure) and the arrangement of a system of extra (war) taxes.[2] The same writer also discusses at length the subject of war treasure and defends it. In his opinion, if the amount is moderate the service which it performs — namely, preservation of greater security for the state and for the national economy — outweighs the loss incurred by way of interest losses, etc. A further advantage of it lies in the ability of the government thereby to secure better conditions for its war loans. It is surprising to us that so great an authority in public finance as Professor Wagner should entertain such ideas on the use of a war treasure. As we shall see in a later chapter, the war treasure has been discarded by practically all other authorities on public finance as an inadequate and uneconomical system of war finance. An immediate need for a fund at the outbreak of a war can be easily met by the government by the issue of treasury certificates or some similar device. The modern war loans, also, are so large that the conditions of their flotation are very unlikely to be affected at all by the government's possession of a relatively small fund in the form of a war treasure; rather, as we shall see later, they are conditioned upon the permanent credit of the government.

[1] Wagner, *op. cit.*, pp. 165-66.

[2] See *ibid.*, pp. 170-73.

CHAPTER III

Economic Effects Due to the Nature of Public Debts

From the foregoing survey of the opinions of many prominent writers on public finance, it seems well established that public debts are in themselves neither good nor bad. Consequently their economic effects always depend upon the purpose for which the debt is incurred; upon the nature of the loan, including the amount, the terms, etc.; and finally, upon the industrial, social, and political conditions of the country.[1] For that reason no sweeping general conclusions can be drawn from the study of this question. Implicitly or explicitly we have to employ constantly our familiar economic idiom "other things being equal", and thus try to draw particular conclusions out of particular situations. And from the sum of these conclusions a few generalizations may be ventured which may be called "the economic effects of public debts".

It must be stated, first of all, that there is no direct or immediate economic effect upon a country if the debt transaction is followed merely by an adjustment of credits. Thus, when an old debt is paid with the proceeds of a new debt, or when a floating debt is cancelled by the issue of bonds, or again when one country settles an account with another, there follows in each case simply an adjustment of credits. There might be administrative expenses and some financial loss (due to slight changes in interest rates) to the government, but broadly speaking, there will be no significant

[1] See H. C. Adams, *Public Debts*, p. 53.

economic effects arising in those cases, for industry is not directly affected by such transactions because none of the control of the actual capital of the country is transferred and consequently there is no readjustment in the application of labor. A good historical example, often mentioned by writers on public finance as one of such debt transactions, is the French loan after the war of 1870 to pay one billion dollars of indemnity to Germany.[1] In this case, France sold her rentes as well as her holdings of foreign securities by means of an international refunding operation and was able to leave unaffected her domestic capital invested in current industry. French foreign trade was not appreciably affected, nor was production disturbed, and the country's industry was carried on smoothly.

It is clear, then, that a public loan directly affects industries only when it involves the transfer of domestic capital, and the degree to which industries are affected depends upon the amount of capital transferred. Let us now consider the kinds of debt transactions which involve the transfer of the control of domestic capital, and their economic effects. One of them is the so-called " forced " loan.

A. *Forced Loans:* — Historically, there are many forms of forced loans, but of these the issue of legal-tender notes is the most common and at the same time the principal method of forced loans, and therefore, the only one requiring discussion for our practical purposes. When these government notes are suddenly issued, there is an increase in the medium of exchange without any commercial necessity for such an increase, — in other words, there is an inflation of the currency. Prices will rise, commercial relations will be disturbed, and creditors will suffer severely. Prices rise because there is an augmented supply of money to carry on exchanges, without any necessary increase in the commodities

[1] Adams, *op. cit.*, pp. 54-57. Also Leroy-Beaulieu, chap. iii.

to be exchanged. Commercial relations are disturbed because merchants and manufacturers must readjust themselves to the sudden rise in the prices of goods. Creditors suffer, because the same nominal amount of money does not have as much purchasing power as before. Moreover, as is always the case in a period of rising prices, wage-earners suffer because the rise in wages always lags behind the rise in prices. If, then, this form of forced loan is carried out far enough, Gresham's law will be brought into operation and the precious metals will either be driven out of circulation or be used at a premium. The evil effects of an excessive forced loan are so obvious that a government should never resort to this method until all other methods of borrowing have been exhausted. A more moderate example of the evil effects arising from forced loans is the condition of the United States during and after the Civil War, when the government issued a large amount of greenbacks; and a more extreme example is the financial condition of all the principal countries of Europe immediately after the World War. We are familiar with the fact that even today the franc, the lira, and the ruble are worth only a fraction of their par values.[1] Nor does the government itself gain much in the end, for what it saves by not needing to pay interest is counterbalanced by the enhanced prices of the goods and the services which it must purchase.

Let us take an example from the recent war. The Currency Act of 1914 empowered the British Treasury to issue Currency Notes to an unlimited amount. The banks came into possession of them through their depositors, who were paid by the government for goods and services. The banks, thus possessed of new cash, either made new advances to their customers or subscribed for Treasury Bills and other government securities. The money so received by the

[1] This part was written before recent stabilizations of those currencies.

government was again spent by the government and returned to the banks through their depositors. The banks only kept a portion of this money as cash reserves and again invested the remaining sum in government securities, the process being repeated again and again, until deposits in banks increased many times over. This of course meant an increase in purchasing power without any necessary increase in production. Hence, there followed inflation, high prices and other evil consequences.[1]

B. *Short-term Loans:* — Sometimes governments contract loans for a few months, in anticipation of revenues in the near future. These short-term loans are floated by issuing what are variously termed in different countries as Treasury Bills, Treasury Certificates, etc. There are two great advantages to this sort of borrowing. One is the ease with which it can be done. There are many business men and banks who are glad to invest their temporary surplus funds in such government certificates. The government can also often hand over these certificates to private contractors in payment of its dues. The other great advantage of certificate borrowing (the term commonly used in the United States for this kind of loan) lies in its economy. The saving effected by the government comes in two ways. In the first place, the government can ordinarily obtain the temporarily idle funds in private hands at a relatively low rate of interest. In the second place, too large an accumulation of idle surplus in the Treasury is avoided by certificate borrowing, because, unlike when it issues bonds, the government can borrow almost any small amount according to its need.

On the other hand, there are several dangers to a large floating debt at very short term.[2] First, there is a financial

[1] See T. J. Kiernan, *British War Finance*, p. 93.

[2] See *Revue de Science et de Legislation Financières*, Jan.-Mar. number, 1925, pp. 100-102.

danger in that the time for redemption comes quickly and the government may not be able to repay a large sum. If, at the same time, capital is in great demand by industry and commerce, and if confidence in the government is shaken, the renewal of the loan would require higher rates of interest or some other advantages which would be burdensome to the future financial management of the country. Secondly, from the economic point of view, short-term floating debt presents some grave disadvantages to a country: — (a) The Treasury having great facilities to borrow at short term, these borrowings are liable to become habitual. In other words, the debt at short term has a tendency to become permanent by means of unlimited renewals. The capitalists are thus induced, if the rate of interest or the advantages are considerable, to confide their funds to the Treasury in a permanent manner. This is to the detriment of the banks of deposits and discounts. The banks no longer having as many deposits, the rate of discount of commercial paper is raised, and the means of bank credit become more difficult. This increases the net costs of products, which in turn entails a rise of prices and of the cost of living. (due to [illegible]

(b) Even if the individuals continue to make deposits in the banks, the existence of a large short-term debt at high interest incites the banks to place their funds of deposit in Treasury certificates instead of making discounts and running the risks which they require. That is an operation very profitable for the banks but very disadvantageous to commerce and industry. The banks pay a small interest to the depositors and purchase the Treasury certificates bearing a sufficiently high interest; they benefit thus by the difference between the interest they pay to their depositors and the interest they receive from the public treasury. This operation, therefore, turns away the banks of deposits and discounts from their proper social mission, which of course is harmful to commerce and industry.

(c) Another economic danger of the existence of a large floating debt at short term is the inflation that it provokes directly or indirectly. Direct inflation may be brought about in three ways: (1) The Treasury certificates may be used by the public as a purchasing medium, in which case those certificates are virtually transformed into paper money. (2) If the holders of these certificates deposit them in banks and create deposit-credits thereby, the result is an increase in the instruments of payment without a necessary increase in the amount of business. (3) When the Treasury uses its certificates to pay its creditors, and if the creditors of the Treasury discount at the national bank of issue the certificates they have received, or if they consent to some advances, the bank will be induced to issue some paper-money, — in other words, to create a direct inflation. To the extent that these creditors hoard the certificates there is no influence on inflation.

(d) Whatever may be the use which is practically made of Treasury certificates, there is a constant menace of inflation on account of the existence of a large public debt at very short maturity. For, any event that arrests or slackens the renewal of Treasury certificates has the evil consequence of an issue of paper-money. If such an event does once occur, from that time on the increase of Treasury certificates in circulation will shake the confidence of the foreign holders of those certificates and, indirectly, of the foreign holders of national money, which in turn will adversely affect the national rate of exchange.

So much for the theory. Let us now turn to facts. In the first half of the World War, the British government made enormous issues of 3-, 6-, 9- or 12-month Treasury Bills which drew money only from the financiers and professional money dealers. Had the government issued bonds (which it did later) it would have drawn the money of the

people out of their real savings, and at a lower interest rate than that of the Treasury Bills. The rate of interest paid by the British government for this kind of credit increased steadily from 2¾% in April, to 5½% in January, 1917. Moreover, the amount of Bills outstanding at the end of 1915 was £380,000,000, while at the end of 1916 the figure had risen to £1,148,000,000.[1] According to Mr. Kiernan, the British government's control of the money market by the over-issue of Currency Notes and Treasury Bills resulted in a discouragement of thrift, in higher prices, in profiteering by the moneyed classes and in a relative decrease in wages.[2]

During the World War the United States also made the following short-term borrowings in the form of "Treasury certificates of indebtedness": [3]

Amount	*In anticipation of*
$50,000,000	1917 Income Tax
868,000,000	First Liberty Loan
2,320,493,000	Second Liberty Loan
1,624,403,500	1918 Income and Excess Profits Taxes
3,012,085,500	Third Liberty Loan
4,659,820,000	Fourth Liberty Loan
157,552,500	1919 Income and Excess Profits Taxes

The United States government lost the advantage of obtaining low interest rates through this means of borrowing by using it, not as a temporary measure just before the funded loans were floated, but as an ever-recurring measure in anticipation of each successive loan. (See above table). Furthermore, the advantage of avoiding a Treasury surplus was largely lost by the early adoption and continued use by

[1] See T. J. Kiernan, *British War Finance*, p. 93. Also, Kirkaldy, *British Finance*, 1914-1921, pp. 153-54.

[2] *Op. cit.*, chap. iv. *Cf.* Colwyn Report, Ev. p. 277, E in C.: 2.

[3] See J. H. Hollander, *War Borrowing*, p. 27.

the government of the policy of a mounting Treasury balance.[1] The evil effect of the excessive use of short-term borrowing in the United States was seen even after the war when on April 30, 1920, the floating public debt (exclusive of War Savings Securities) still amounted to $2,994,272,555 — all outstanding in the form of Treasury certificates of indebtedness, bearing high interest ranging from 4¾% to 5¼%.[2]

Again, a persistent resort to certificate borrowing by the United States government exerted a strain on the money market, which was harmful to business. As long as the Treasury pursued during the war the justifiable policy of a mounting balance, and as long as the banks could counteract the withdrawals from "certificate-created deposits" by preferential rediscounting with the Federal Reserve Banks, monetary strain was avoided by certificate borrowing. But this advantage soon disappeared when the dwindling Treasury balance compelled the Treasury to withdraw its deposits as fast as the banks granted them, while the banks' profits were wiped out by such a rapid withdrawal. The banks, working as they did with low reserves, were thus strained in their resources and the money market was hard pressed. Federal Reserve Banks had to be utilized, followed by a further reduction in the reserve ratio and finally by a resort to deliberate credit restriction.[3]

During the World War, the French government made considerable use of short-term loans in the form of Treasury Bills, which were renamed early in the war "National Defense Bills".[4] At first these were issued to mature in three

[1] Hollander, *op. cit.*, p. 201.

[2] See J. H. Hollander, "Certificate Borrowing and the Floating Debt," in *The Weekly Review*, vol. ii, May 22, 1920, p. 552.

[3] See *ibid.*, pp. 553-54.

[4] See H. E. Fisk, *French Public Finance in the Great War and Today*, pp. 15-16.

or six months or a year. But later, bills of even one month's maturity were also issued. These Treasury Bills were very popular and were bought to a large extent by the working classes out of their small savings. They were at first issued in denominations equivalent to $20, $100, and $200, but later in as small denominations as 5 francs and 20 francs. In 1914, $312,000,000 worth were issued; in 1915, a net addition of some $839,000,000 was made; in 1916, a net addition of $1,089,000,000; in 1917, a net addition of $1,345,000,000; in 1918, by November 30, the total outstanding issue had increased to $6,357,000,000. This amount was reduced by almost 2 billion dollars in December, 1918, by means of a new permanent loan. However, the issues of the Treasury Bills steadily increased in 1919, so that by the end of that year the total outstanding amounted to about 9½ billion dollars.

According to an authority on French war finance, the Treasury Bills provided for nearly 29% of the French war expenditures. The chief factors which prevented the use of such an enormous amount of short-term loans in France during the World War from giving rise to disastrous economic results were: The extreme patriotism of the common people;[1] their strong habit of saving, causing them to hoard the Bills instead of using them as a currency; and the timely issue of long-term loans.[2]

In the last war, the German government also made large use of Treasury Bills.[3] In all, about $18,000,000,000 of these bills was issued during 1914-1918. The fact that scarcely any resort was made to taxation during the war for meeting the costs of the war, but that the above short-term loans were bolstered up by long-term war loans amounting to

[1] But *cf.* Bastable, *Public Finance*, p. 686.

[2] See H. E. Fisk, *French Public Finance in the Great War and Today.*

[3] See E. L. Bogart, *War Costs and their Financing*, pp. 187-194.

$24,640,000,000 is sufficient to explain the enormous inflation in Germany during and immediately after the war.

From what has been observed above in theory and practice concerning short-term loans, it is certain that they are, at best, but temporary expedients. Unless their amounts are relatively small and unless they are promptly redeemed by the issue of long-term loans (if not by taxation), they are sure to bring about inflation, government discredit, and other related evil effects. It must be admitted, however, that the conduct of the European countries in the last war with reference to their short-term loans was determined, at least in the beginning of the war, largely by their miscalculation as to the possible duration of the war. When they finally came to realize that the war was going to last much longer than they had expected, the evil effects of the Treasury borrowing were rampant, and all that could be done was to prevent their further spread. Taking too much advantage of its facility had made the Treasury borrowing lose its other great merit — economy.

(C) *Public Bonds:* — By far the most important form of public debt transactions which involve the transfer of the control of capital is the issuance of bonds. What are the economic effects of public borrowing by bond issues? The answer differs according to several considerations, chief among which are (1) the rate of interest; (2) the period of the loan; (3) the convertibility; (4) the size of the bonds; (5) the taxability; (6) domestic or foreign loan.

(1) *The Rate of Interest:*[1] — If public bonds are issued at the normal market rate of interest, there will be no disturbance of industry and trade. They will be bought with the fund of free capital which otherwise might be used for consumption or for investment in private business. No

[1] See Adams, *Science of Finance*, p. 521. *Cf.* Wagner, *Finanzwissenschaft*, p. 154 *et seq.*

special competition is established between public and private securities, and therefore, we may conclude that the issuance of such bonds is followed by no unusual economic effects. This is especially true in the beginning of a war or a period of business depression when there is always business uncertainty and when industrial entrepreneurs hesitate to expand their business. This is a very opportune period for the government to obtain the country's fund of free capital without affecting the market rate of interest. We are of course speaking on the assumption that the public loan in question is of such moderate amount as to be easily absorbed by the money market. If a huge loan is floated in time of peace for industrial purposes, there is a likelihood that private competition will ensue.

Suppose the government needs more money than it can obtain by offering the market rate of interest. If its credit is good, it will obtain the needed money, provided the amount is not altogether too large, by paying a high rate of interest. What will be the effects on industry? The results depend chiefly upon the nature and the importance of the funds that are thus obtained. Undoubtedly, some money will come from the funds of individuals which would otherwise have been spent in consumption. That means that the commodities which would have been bought by the individuals will not now be bought, or in other words, the demand for those goods will be diminished.[1] Other things being equal, the industries engaged in producing those goods will be depressed. Less capital and labor will be employed in them. The commodities most likely to be affected will be those of comfort or luxury, because it is hardly conceivable that the people will curtail the use of the necessaries of life in order

[1] This statement must be modified to the extent that such a loan incites the individuals to greater activity and thus enables them to earn greater income than before.

to invest in government bonds, nor is it likely that the people can accumulate to any appreciable amount that money which normally goes to purchase the necessaries of life. To speak in concrete terms, such things as automobiles, radios, paintings, and the like will be dispensed with, and the money will flow into the government treasury.

Now, such an effect will be very serious for the country, so that the government is unlikely to resort to such a loan except in cases of emergency such as wars or the reconstruction works carried on at the present time in war-devastated regions in Europe or the quake-stricken regions in Japan. In such cases, the men thrown out of private employment will be employed by the government and moreover the circulating capital unemployed will be diverted to this field: for instance, in manufacturing war materials in time of war, or in manufacturing lumber, bricks, iron frames, etc. in reconstruction work.

Let us take another case. Suppose the money obtained by the government through a high rate of interest comes from the people who had invested in industries which are on the verge of making no profit or only a low profit at the time. Of course only circulating capital is thus obtainable, because fixed capital cannot be transferred to the government. It might be asked, would not the government be able under those conditions to obtain such a fund at a normal rate of interest? The answer is in the negative, for this reason: unless the interest accruing to the circulating capital from the high rate of interest of the government bonds amounts to a larger sum than the profit from the fixed capital, the people will not buy government bonds, but will keep on investing the circulating capital in industries in order to keep fixed capital employed.

The proprietors of the businesses which are on the verge of no profit will sell their buildings, machinery, equipment

and the goods on hand for what they will bring and invest the proceeds in government bonds. As to those industries which have been made unprofitable through the change in demand (on account of war or similar causes), the owners will for the time being suspend their activities and invest all their available free capital in the government loan.

The raising of this kind of fund, then, is very advantageous to the community, (1) because it gives opportunity for a change of investments to those who need it, and (2) because the manufacturers whose businesses have been made dull will also have a chance to buy the bonds with their free capital.

The third source from which the government can obtain funds through a loan bearing a high rate of interest is the profits of the prosperous industries. The chance given them to invest their surplus capital in lucrative bonds incites them to greater activity and efficiency. The source of those profits is either intensified labor or labor-saving inventions. Either is highly desirable as an effective means of increasing production.

Thus we may come to the conclusion that, provided the exigency requires the floating of such a high-rate loan thereby disturbing business relations, it aids in readjusting business relations again and in encouraging production,—production, however, in a new direction.

Suppose a government has to raise a fund by a loan with an abnormally high rate of interest. The effects are very harmful, both to the government and to the community. By so doing the government will tend to absorb all the capital invested by the marginal producers, and thus to dry up the sources of taxation. Moreover, a greater burden is laid yearly on the revenue in order to pay off the interest. Looking at the matter from the standpoint of the community, the general scale of prices will suddenly rise and speculation will

follow. The industries producing goods that respond quickly to industrial changes will gain unusual profits, while those that respond slowly will lose heavily. The commodities which the workingmen consume respond most quickly to any change in commercial conditions, but labor responds very slowly. Hence, while prices rise fast, wages will lag behind, and the employers will reap the extra profits at the expense of the workers. For these reasons, only the most urgent necessities can justify the flotation of such a loan.

Generally speaking, therefore, loans at the market rate of interest will be followed by no very important industrial results, provided that the amount of the loan is moderate. Loans at a rate higher than market rate will disturb to a certain extent the placement of capital; but if the occasion of the loan is (as in the case of a war) such as to cause a readjustment of already disturbed conditions of trade and industry, such a loan is positively advantageous. But if the rate of interest is so high that it becomes itself a powerful cause of commercial disturbance, it will have serious consequences.[1] In particular cases, however, there are many factors which operate to modify the above conclusions. For instance, the marginal producers will theoretically abandon their business and invest in lucrative government bonds; but actually there will be many business men who, for psychological and sentimental reasons, will tenaciously adhere to their low-profit undertakings. Again, when the rate of interest paid is very high, foreign investors will come in to compete with domestic capital. Furthermore, when a government contracts a considerable loan at a high rate of interest, the benefit is not always on the side of the capitalists alone. For, such a loan almost always has two consequences: higher taxation

[1] See H. C. Adams, *Science of Finance*, p. 526. Also *cf.* Wagner, *Finanzwissenschaft*, pp. 162-64.

(of which the rich bear the greater share) and extensive employment of workingmen in government works. Witness the situation in Japan after the great earthquake.

(2) *The Length of the Period:* — The time for which a public loan should run depends primarily upon the purpose for which it is contracted. Loans are contracted to cover casual deficits, to cover emergency expenditures, or for public investments. When loans are contracted for the casual deficits of the government they are necessarily of very short duration. A few months or a few years at most ought to be sufficient to bring about the fiscal readjustment through increased revenues. The very purpose of the loan regulates its duration, and therefore, it is not necessary to discuss deficit-filling loans in this place.

When it comes to loans for emergencies such as a war or some natural calamity, the duration of the loan has important economic bearing. In the first place, the rate of interest differs according as the bond runs for 10 or 20 years or for 40, 50 or more years. Considered alone from the point of view of the rate of interest, it is usually preferable for the government to issue bonds of shorter duration because they can be issued at a lower rate of interest. Although it is true to a certain extent that the investing public is loath to have the principal paid back so long as the investment is secure, yet a loan of too long a duration arouses a feeling of insecurity in the minds of the investors, because they are unable to surmise the condition of the country so many years in advance. Hence they will demand a higher rate of interest, which means a greater public burden. Again, loans of very long duration are liable to cause an ever-mounting public debt, because a need for contracting another loan may arise before the existing debt will have been repaid. There is only a negative advantage in a loan of very long duration in that the government can avail itself of the falling market-

rate of interest to convert its bonds into those bearing lower interest. For these reasons, public bonds should not run for a longer period than 25 or 30 years at most.

Another purpose for which a loan is contracted by the government is, as stated above, investments. Government investments may take two forms: commercial or non-commercial. Under the former comes the purchase or the building of railroads, canals, etc., or the manufacture and sale of tobacco, salt, liquor, etc. Under the latter comes the building of roads, bridges, public schools, hospitals, etc. With a commercial investment there is no objection even if the loan becomes permanent, because the profits from the investment in question will more than pay for the interest, and therefore, there is no burden on the public because of the debt. Public railroads in Prussia and Japan offer good examples of this kind of investment.

The case is different with non-commercial government investments. Here the primary consideration is to adjust the life of the loan to the probable life of the object of investment. In other words, the loan should be repaid within the period in which the object of the loan (a schoolhouse, a bridge, a hospital, or what not) endures. In a country like the United States where the government is quite decentralized, the non-commercial government investments occupy a very important place in the finances of the municipal and the State governments. In recent years, especially, the trend has been toward a greater and greater expansion of governmental works in this direction, and the question has become very important. For this reason we see it discussed quite often in various State and local government reports and in periodicals.

Several years ago, lively discussions on local government loans took place under the subject "The Pay-as-you-go Plan". Writers who are in favor of public loans for public

improvements argue that there is nothing financially unsound in borrowing money by the issuance of bonds in order to provide funds for worthwhile improvements, if the term of the bonds is less than the reasonable life of the improvement and if adequate provisions are made for paying such bonds at maturity either by the serial or the sinking-fund method. If the loan is for necessary improvements, it will either save the money or create the value to pay the debt and interest. It does not at all lay the burden on future generations; the improvements will pay for themselves.[1]

In one of the recommendations made by the Municipal Research Bureaus of Cleveland, Minneapolis, St. Paul, Duluth, Kansas City and Portland (Oregon) in their reports for 1922, the point is brought out that the term of the bonds should be limited to the life of the improvements.[2] Mr. L. W. Lancaster also mentions the fact that in Massachusetts one of the features of the laws enacted for local financing is, that, with regard to permanent indebtedness the principle that debts should be paid back within the life-time of the improvement is recognized.[3]

From the above considerations it is clear that the length of the period for which a public debt runs has important economic effects. Debts that are incurred for casual deficits take care of themselves through the conditions of their existence, but other debts, such as those incurred for emergency expenditures or public investments, should be carefully planned. Loans made for industrial purposes may follow the rules of private business finance, that is to say, so long as the undertaking is self-supporting the bonds may be made perpetual or at least may be of very long term. But in cases of loans for emergencies or public improvements the danger

[1] See *National Municipal Review*, June, 1924, p. 336.

[2] See *ibid.*, vol. xi (1922), pp. 385-89.

[3] See *ibid.*, March, 1924, p. 163 *et seq.*

of a mounting debt is so great that they should not run longer than the life of the improvements, or for emergency loans, not longer than twenty-five or thirty years. If such limits are exceeded, not only will there be a heavier burden for future generations but public credit will also be undermined.

Thus far we have spoken of the bonds for definite periods of time. There are, in addition, two kinds of bonds which are less common or are almost obsolete and which have indefinite periods of time. They are the so-called *"perpetual" bonds* and the *terminable annuities.*

Before the World War by far the greater part of European debts consisted of the "perpetual" bonds. English consols and French rentes are good examples. These bonds have no definite date set for their repayment, but they are redeemable at any time by the government, subject to certain limitations for the security of the lenders such as an obligation to give a previous notice of the intention to redeem, or to make a promise not to redeem for a certain length of time. There are advantages and disadvantages to "perpetual" bonds. As to their advantages: In the first place, the government is relieved from the risk of demands for repayment of capital, and has only to provide for the payment of interest. An extraordinary burden can be divided into any number of smaller payments to suit the financial capacity of the government in the future period, and consequently its pressure is distributed so as to be less onerous. Yet the creditor is in no way prevented from realizing the capital value of his loan, because he can always go to the stock exchange and sell his bonds at the market price. Again, with the improvement of its credit, the government can reduce the original rate of interest by means of its conversion privileges.[1]

On the other hand, there is a strong argument in favor of

[1] See C. F. Bastable, *Public Finance* (1903 ed.), pp. 688-89.

the amortizable loan over the "perpetual" loan. Undoubtedly, there are dangers to a large debt without a definite period of repayment. Each expenditure, whatever it may be, has no unlimited utility. Each debt should not, therefore, escape from the rule of repayment. To contract a "perpetual" debt, is completely to lay aside the rational period of repayment. Besides, from the standpoint of the lenders, there are two disadvantages: (1) The fact that no one can tell what will be the economic, political or social situation in the distant future; (2) the opposition of the taxpayers, which may even expose the lenders to the danger of repudiation, when the conditions of the loan become too disadvantageous for the former.[1] As an objection to a loan in perpetuity it may be said that if a government is left free to deal with the repayment of the debt, it may never repay. The reason is that politicians are afraid to incur unpopularity by levying heavy or new taxes in order to repay the debt. They are, therefore, always ready to shift the burden to the future. Another objection arises in connection with the process of repayment: if the prices of securities at the market are above par the repayment becomes burdensome.[2]

After weighing both the advantages and the disadvantages of perpetual bonds, it seems that, provided a strict enforcement of a sinking-fund provision is made, the perpetual bonds can be utilized advantageously by the government with loans for non-commercial or semi-commercial investments, such as the extension of the postal system, the building of canals, etc. With war loans, however, the danger of non-repayment or at least of gradual accumulation of debt is so great that it seems best not to resort to this form of loan.

Terminable annuities: — These may be divided into two

[1] See *Revue de Science et de Legislation financières*, Jan.-Feb.-Mar. number, 1925, pp. 111-13.

[2] See *ibid.*, p. 118.

classes, viz., the annuities which cease at the end of a certain number of years, and life annuities. According to one writer of repute, the trouble with the former type of annuities is that the principal is returned in such small fractions that the individual lenders will have spent their capital at the end of the period of annuity. If the individuals wish to avoid this they must take the trouble to calculate and to save annually that portion of the annuity which corresponds to the fraction of the capital return. But most individuals are loath to take such trouble, and therefore, the terminable annuities are not convenient for general investors. For this reason, they are more often taken up by large business concerns such as insurance companies, railroad companies, landed companies, etc. The government usually pays these companies their expenses incurred for borrowing in their turn from the public in order to subscribe to the government loan. Private companies rarely have credit as good as the state. Hence, this indirect borrowing by the government is more costly to its treasury than direct borrowing from individuals. The fact should be admitted that a regular annual payment of a small sum (as compared with the principal) will extinguish the total debt within a given period of years. This may at first seem a great advantage, but that very fact often tends to government waste, especially when the loans are quietly made through large companies, as already mentioned.[1]

An argument, considered by some persons as decisive, is often advanced in a period of crisis of national credit in favor of an indirect loan to the state under the form of terminable annuities discharged to an establishment. It is somewhat as follows: It may be that at a given moment the financial situation of the state may be such that the issue of a direct loan would strike a blow at public credit. For

[1] See on this point *Revue de Science et de Legislation financières*, April-May-June, 1925 number, pp. 193-201.

example, the public debt may be very heavy; and public opinion may be hostile to loans. If the treasury borrows directly, this addition to the debt will entail a rise in the rate of interest and will lower the prices of the bonds already issued. If, on the other hand, one proceeds by way of an indirect loan through the intermediary of an establishment other than the state, those consequences will not appear, because the public will not perceive that there is really a national loan. The necessary loan can be issued and the financial market will not be disturbed.

Nevertheless the facts do not conform to the argument. When an establishment borrows for the benefit of the state, it always gives as security and guaranty the terminable annuity promised by the Treasury, when it appeals to the public or to the bankers. In both cases the borrowing establishment recognizes that it has less credit than the state, since the loan is granted to it only because the annuity is promised by the state. Thus, it will have to submit to conditions more onerous than those which would have been made for a direct loan of the state. The rate of interest of the indirect loan will be ½ or 1% higher than in the case of a direct loan. Furthermore, it does not conform to facts to assert that an indirect loan, contrary to a direct loan, exercises no influence on the market prices of the public bonds already in circulation and does not modify the conditions of the financial market. By an indirect loan through the public or the bankers, capital is absorbed; there is a new investment offered at a rate of interest more advantageous than that procured by the existing bonds of the state. There is no reason why this rise in the rate of interest should not have the effect of depreciating the public bonds. For public bonds do not enjoy a special favor on the stock exchange; they rise and fall in value as the interest rate rises or falls. The government can indeed oppose this movement for a time by extraordinary measures

such as an obligation to make certain investments in its own securities, purchases in the exchange, funds of maintenance, etc. These expedients, however, have only a temporary effect. In the end—at the close of a few days or a few weeks—the public bonds may suffer the counter-blow of the variations of the interest rate on the market. If, therefore, the indirect loan inevitably raises the rate of interest, public bonds will necessarily be depreciated.[1]

Aside from the foregoing objections, since the capital lent is returned to the lenders in driblets, the terminable annuities have the indirect effect of checking the saving of capital and of encouraging thriftlessness. Thus, considered from all angles, terminable annuities are an uneconomical kind of loan and, therefore, should not be used except for urgent necessity or in specially favorable circumstances when the demand for them by large business companies or individual possessors of large amounts of liquid capital is sufficient to enable the government to issue them at a reasonable rate of interest. As a matter of fact this form of loan is now almost obsolete.[2]

Life annuities are a special form of terminable annuities. They were a popular form of loan in France and Great Britain under the designation "tontine" (named after its originator Tonti). The idea of the tontine is very simple. A group of persons of very nearly the same age lend to the government a certain sum. The government is then obliged to pay each year to each lender of the group a constant annuity, including the interest and the amortization charge. The share of each deceased annuitant devolves upon the survivors, until finally, when the last survivor of the group dies, the annuity ceases. According to a French writer, this con-

[1] See *supra*, pp. 201-203.

[2] At present the French government is using it to a limited extent to relieve war-sufferers.

trivance is never advantageous for the Treasury unless the lives of *all* the participants without exception are shorter than the *average life* which has served as the basis of calculations for the fixing of the annuity. But this has never been the case, because the participants in the tontines are always persons who are of excellent health and of great physical vigor. The last survivors have always exceeded the average taken for the basis of calculations. This method of loan has been a great loss to the national treasury for the reason that a few long-lived survivors can claim the entire amount of the annuities of the whole group to which they belong.[1] This objection can be partly removed by limiting the sum to be attributed to the survivors, but then the system will lose much of its popularity. Be that as it may, when the government is in a stringent financial condition the perpetual bonds serve the purpose of raising funds better, because they do not require for the time being any amortization charges and, therefore, less burden is imposed on the strained treasury. Tontines, however, are now obsolete.

(3) *Convertibility:* — Ordinarily, bonds of short duration such as ten or fifteen years have no conversion privileges attached to them by the government. On the other hand, perpetual bonds and bonds of long term enjoy this privilege. When the state makes a large loan, it does so, more often than not, under the stress of a great necessity. Such is especially the case with war loans. Under such circumstances the rate of interest that it is compelled to pay is high. Therefore, when the strenuous period is past and the country's financial and economic conditions return to normal, the market rate of interest always falls. Then is the time when the government can use its so-called conversion privilege over its bonds. The saving to the government, and hence to the taxpayers, through this process of reducing

[1] See *supra*, pp. 237-47, especially p. 238.

the rate of interest on the public bonds is very great. Conversion is a process in which the government offers the public creditors the choice of redemption of their bonds or the exchange of them for bonds of lower interest. Needless to say, this assumes that the government is enjoying good credit.

With reference to the process of conversion, the government should always bear in mind several important considerations. First of all, the capital of the debt should not be increased, unless there is a sufficiently counteracting gain, because the future burden is thereby increased.[1] Secondly, the conditions of conversion should be stated simply so that they may be easily understood. Thirdly, the best time for the operation of conversion is the beginning of a period of returning prosperity that usually follows a period of business depression. There is then plenty of free capital and the rate of interest is low so that the success of conversion is assured.[2] Fourthly, the condition of the new bonds to be issued in exchange for the old ones should not be such that the new bonds cannot be redeemed or reconverted for too long a period. H. C. Adams criticized the refunding act of 1870 of the United States on this score.[3]

In England the process of conversion has been made use of ever since 1717, when the rate of interest on the public debt was reduced from 6 to 5 per cent. In 1727 a further reduction of 1 per cent was made, by which the government realized a saving of £400,000 per annum. In 1749, Pelham succeeded in reducing the interest on part of the debt to 3½ per cent for seven years, and 3 per cent afterwards. Next year the interest on the rest of the debt was reduced to 3½ per cent for five years, and 3 per cent afterwards.[4] "In

[1] *Cf.* Italian consolidation act of November 1926, described, *infra.*

[2] See Bastable, *Public Finance* (1903 ed.), pp. 706-707.

[3] See H. C. Adams, *Public Debts*, p. 226 *et seq.*

[4] See Bastable, *Public Finance*, pp. 631-32.

1822, £152,000,000 of 5 per cent stock was converted into 4 per cents, and in 1830 further reduced to 3½ per cents. The old 5 per cent stock (£76,250,000) was reduced to 3½ per cent, to which rate a small balance of 4 per cents (about £10,000,000) was also reduced in 1834."[1] By the firm administration of Sir Robert Peel, government credit was enhanced, and in 1844, the 3½ per cent stock — which amounted at this time to £248,000,000 — was converted into 3¼ per cent for ten years and 3 per cent afterwards.[2] In 1888, Lord Goschen succeeded in converting practically the whole of the 3 per cent stock — amounting to £558,000,000 —into new stock bearing 2¾ per cent interest till 1903, and 2½ per cent from that date for twenty years.[3] The conduct of the British government after the World War with reference to conversions is subject to criticism, because the capital sum of the debt has been increased without a corresponding gain in interest reduction, etc.[4]

In France, two important cases of conversion occurred under the Second Empire. The first was the conversion of the 5 per cent stock to the amount of £140,000,000 into 4½ per cent, bringing £700,000 per annum of gain to the government. The second conversion was that of 1862. In this case the government took the unjustifiable course of issuing the new bonds below par for a premium, so that, although it gained £6,300,000 as a premium, it increased the debt of the nation by nearly £64,000,000, besides preventing the chance of further conversion for many years to come. In 1883 the old 5 per cent bonds were converted into 4½ per cents without any increase of capital, and in 1894 this was again converted into 3½ per cents. Since the capital of the debt at

[1] Bastable, *op. cit.*, p. 636.

[2] *Ibid.*

[3] See *ibid.*, p. 639.

[4] See Colwyn Report, pp. 44-50.

this time was approximately £271,000,000, the gain to the state through these conversions was over £2,700,000 per annum.[1] In France, however, on account of the fact that the state creditors have been so numerous and have been so scattered among all classes, the government has often faced strong opposition to its employment of the conversion process.[2]

In the United States the system of conversion was applied by the refunding act of 1870. By this Act the Civil War debts bearing 6 per cent or more of interest were converted into 5, 4½, and 4 per cent bonds, maturing at different dates.[3] Again, by the refunding provisions of the Act of 1900, the treasury was authorized to issue thirty-year two-percent gold bonds to refund the outstanding three-percent bonds of 1908 (Spanish War loan), the four-percent bonds due in 1907, and the five-percent bonds due in 1904, totaling $839,000,000. But the bonds were converted for a premium so that the benefit to the government was not so great as the low rate of interest might indicate. Inducements were also given to the banks by exempting them from the tax on their note-circulation if they held the new 2-percents as security. By December 31, 1900, $445,940,750 of bonds was refunded; the premium paid was $43,582,000 and the saving of interest was $54,548,000. Making no allowance for the loss of circulation tax, due to exemption privilege given to banks, the net saving to the government due to this refunding operation amounted to $10,966,000.[4] Through subsequent conversions, by 1916 nearly three-fourths, $721,000,000, of the total interest-bearing debt in the United States

[1] See Bastable, *Public Finance*, pp. 647-48.

[2] See *ibid.*, p. 646. Also, p. 649.

[3] See Adams, *Public Debts*, p. 231.

[4] See D. R. Dewey, *Financial History of the United States* (8th ed.), pp. 471-72.

bore the low interest rate of 2 per cent.[1] Of the World War loans, the following conversions have been made: In March, 1927, some $1,360,000,000 of the second Liberty 4¼ per cents were refunded into 3½ per cent Treasury notes of 1930-1932; in June of the same year, some $245,000,000 of the same were refunded into 3⅜ per cent bonds of 1943-1947; and in September, some $368,000,000 were refunded into 3½ per cent Treasury notes of 1930-1932.[2]

The recent conversion operation (November, 1926) of the Italian government has really been for the purpose of consolidating the floating liabilities rather than to reduce interest charges. More than 20,500,000,000 lire (approximately $879,450,000) of the floating debt have been converted into 5 per cent bonds. The exchange was made on the basis of 1·16 lire 50 centesimi of the new loan for every 100 lire of ordinary Treasury bonds; 113 lire of the new loan for every 100 lire of the five-year Treasury bonds; 1·12 lire of the new loan for every 100 lire of the seven-year Treasury bonds. Holders of the nine-year Treasury bonds had the option of converting their bonds into the new loan at the rate of 107 lire 50 centesimi of the loan for every 100 lire of bonds. In view of the further fact that the new loan was offered to the public at 87 lire 50 centesimi for each nominal 100 lire of the loan, the Italian government has increased the prinicipal of its debt by this operation, but it has gained an advantage through the fact that it will have no bonds maturing prior to 1931-1934.[3] It is doubtful whether the government ultimately gains by such a conversion.

From what has been said above concerning conversions, we see in the first place that a sound government credit is the

[1] Dewey, *op. cit.*, p. 497.

[2] See *Federal Reserve Bulletin*, Oct., 1927, p. 693.

[3] See New York *Times*, Nov. 8, 1926.

indispensable prerequisite for the effective use of the process of conversion, and in the second place, provided proper caution is taken for the avoidance of the increase in the principal of the debt, for the preservation of further future conversion opportunities, etc., conversion is a valuable financial instrument of the state, by which it rectifies and retrieves its disadvantageous dealings of the past, which it was forced to enter into under strenuous circumstances.

(4) *Size of the bonds:* — At first thought the question of the 'size' of bonds may seem an insignificant one, but a further consideration shows us its due importance, especially in case of war loans. Professor Plehn writes in his book[1] of the experience of the United States government with "popular" loans during the Spanish-American War. The government issued the bonds in denominations as low as $20. About 320,000 persons offered or made subscriptions, and the sum tendered the government amounted to about $1,400,000,000. It is true that the cost of this method of floating the loan was relatively high, but the government gained by strengthening its credit thereby. The popular loan of $200,000,000 of 1898 was, therefore, a signal success. As Professor Plehn tells us, it demonstrated the perfect solvency of the government; it gave the country a financial prestige which went a long way toward hastening the end of the war; and it so strengthened the credit of the government that, had the war unfortunately continued, it would have been able to obtain funds to almost any amount on the most favorable terms imaginable. With a 3 per cent bond selling at 105 during the actual continuance of military operations, a nation may safely regard its credit as unimpaired.[2] The popular Liberty Loans of the United States during the World War are too well known to need description.

[1] See Carl C. Plehn, *Introduction . . . .*, pp. 432-34.

[2] *Supra*, p. 434.

Other countries also tried popular loans during the World War. At the beginning of the war the British government borrowed all the necessary funds from the bankers and the moneyed classes. But when it realized that the war was going to be prolonged, the government found it necessary to appeal to the whole people. In order to attract small investors the Post Office was authorized to sell small denomination bonds of \$25 and \$125 and also scrip vouchers of \$5, \$2½ and \$1¼ which could be applied on the purchase of the bonds.

The first loan had been taken principally by the large financial institutions and wealthy subscribers, the total number of subscribers being only 100,000, but the second loan was taken by 1,100,000 subscribers, and at the same time the amount was almost doubled.[1] The war savings stamps, the lowest denomination of which was 25 cents, and the war savings certificates, the lowest denomination of which was \$5, were also used to raise war funds from the poorer classes.

The governments of the other countries also resorted to bonds of small denominations. Thus the bonds of lowest denominations in various countries were as follows: Hungary — \$10, France, Italy and Austria — \$20; Russia and Germany — \$25; and Canada and the United States — \$50.[2] Taking the largest number of subscribers for any one loan in each country, the results in approximate figures were as follows: United States — 21,000,000; Great Britain — 5,000,000; France — 7,000,000; Italy — 490,000; Canada — 1,000,000; Australia — 220,000; Germany — 7,000,000.[3]

Such a popularization of bonds in each country, except Germany, was extremely beneficial in that it aroused the

[1] E. L. Bogart, *War Costs and their Financing*, p. 161.

[2] *Ibid.*, p. 156.

[3] *Ibid.*, p. 157.

spirit of thrift and economy, to say nothing of patriotism. Moreover, the beneficent influence of popularized public borrowing is felt not only during the war but also after the war. For, to the extent that the public debt is scattered among all classes, class antagonism is avoided, and the people in general are more willing to aid the government in its post-war economy.

(5) *The Taxability of the bonds:* — A government's gain from a low interest rate of its bonds is often lost through their tax-exemption. Tax exemption of government securities is not a new phenomenon in public finance, but this subject has assumed fresh importance since the World War on account of the appearance of the so-called 'surtax'. Those who favor 'tax-free bonds' maintain that there are, among others, two great advantages in them. In the first place, the government will be able to issue its bonds at a lower rate of interest than it would otherwise be able to do. In the second place, other things being equal, the government will be able more readily to sell its bonds than if they were subject to taxation. Both these points are undoubtedly true as far as they go. If, for instance, a rich prospective investor had the choice either of investing in sound private securities yielding 5 or 6 per cent but at the same time liable to an income tax lopping off 50 per cent of the yield, or of investing in a government bond at 3 or 3½ per cent but without tax burden, he will certainly choose the latter. Again, tax-free government bonds — especially if they are long-term—will be more readily saleable to the rich investors in view of the fact that the governments of all the important countries in the world are applying more and more the principle of progressive taxation.

Over against its advantages there are many serious disadvantages in the exemption of government bonds from taxation. To begin with, the government in fact loses more in

According to Professor Seligman (writing in 1925), the loss of revenue to be incurred by the United States Government on account of tax-exempt bonds up to 1926 promised to be at least $300,000,000.[1] When we add to this the loss of revenue borne by State governments, the situation is indeed grave.

In the second place, and directly due to the situation referred to above, tax-free bonds create a privileged moneyed-class which becomes a parasite to the general taxpayers of the country. Its evil effects are two-fold: on the one hand, there will be an inequitable distribution of income, while production is decreased on the other hand because of the retirement of the possessors of money from active participation in industry. Secretary Mellon's annual report for 1923 tells us that large incomes of $300,000 or over took refuge from surtaxes in the haven of tax-exempt bonds. According to the Secretary, there were, in 1916, 1,296 taxpayers with incomes over $300,000; that in the next five years the numbers declined rapidly, thus: 1,015 in 1917, 627 in 1918, 679 in 1919, 395 in 1920, and 246 in 1921; that their aggregate net income in 1916 was $992,000,000, while it had dwindled to $153,000,000 by 1921.[2] Although Mr. Mellon's surmise is refuted by some,[3] there is no question but that the rapid decline in those large incomes was partly to be accounted for by investment in tax-free bonds.

In the third place, tax-exempt government bonds set up unfair competition against private securities.[4] With no immediate prospect in sight of a radical lowering of the present

[1] See E. R. A. Seligman, *Studies in Public Finance*, chap. vii.

[2] *Annual Report of the Secretary of Treasury*, 1923, p. 12, Table II.

[3] See the *New Republic*, Jan. 23, 1924, pp. 220-21; also, see the same for Jan. 27, 1926, under the title "Those Vanished Fortunes, the great Mellon Myth about the Tax-exempt Bonds"—C. O. Hardy.

[4] See *Secretary of Treasury's Report for 1924*, p. 10.

high income tax, it is natural that tax-exempt government securities have an advantage in the market over the securities of private borrowers. The private companies, therefore, would have to pay higher rates of interest. The result will be either that production will be decreased (or at least prevented from increasing) or that prices will rise. In either case, the public will suffer an economic loss.

Lastly, tax-exemption of government securities is a menace to the system of federal revenues and taxation. The present system of taxation in the United States (as well as in all civilized countries) is based upon the principle of 'ability to pay'. But the ability of an individual to pay depends largely upon his income. Now, it is a well-known fact that the majority of great private fortunes consist of securities in one form or other. Public securities are increasing more and more in number and value. It is estimated that they are increasing at present at the rate of one billion dollars a year. If they continue to be exempt from taxation, the evil consequences are not far to seek even though the effects are partly attenuated by the higher prices of the securities which the bondholders are compelled to pay.

From the above considerations it is obvious that tax-exemption of public bonds is economically unjustifiable as well as financially unsound, and therefore, it should not be utilized as a means of popularizing government bonds. It is far better to pay a higher rate of interest, if necessary, because then the government can apply conversion and other means of diminishing its burden due to a high rate of interest. Moreover, as has been stated in a previous section of the present chapter, a high rate of interest on government securities will be a powerful stimulus for thrift and economy on the part of the people of small means, while 'tax-free bonds' offer no such stimulus to them, because they are very little affected by income taxes. Despite the obvious faults

of the tax-exemption of government bonds, a bill prohibiting the future issue of tax-free bonds was defeated on February, 1924, in the United States House of Representatives. Its defeat was chiefly due, however, to political reasons.

(6) *Foreign Loans:* — Thus far we have tacitly assumed that the public loans were made within the country. In concluding this chapter, a few words should now be said of foreign loans. Some writers oppose foreign loans because they entail heavy payments of goods and services to foreign countries by way of interest payments and repayments of the principal. One cannot eat one's cake and have it too, and so, provided that such loans were made for necessary purposes, they are in the main advantageous.[1] Broadly speaking, however, in our age when the means of transportation and communication have been so highly developed, in the long run there is not much difference in economic effects whether a country borrows at home or abroad. The fluidity of capital is so great that economic adjustment will sooner or later take place. Yet there is some difference between the temporary economic effects of a foreign loan and those of a domestic loan: and this difference is by no means unimportant.

Provided a country's credit is good and there is abundant loanable capital in foreign countries, there is no reason why such capital should not be borrowed. For greater production is thereby attained at home and at the same time the demand for the products is assured by the circumstances of the situation. If on the contrary the government borrows from lenders at home, there will be so much less capital available for private industries. Less production will take place, which in turn — through a rise of prices — will entail less consumption at home and less demand for domestic pro-

[1] *Cf.* Bastable, *Public Finance*, pt. 1, sec. ii, pars. 76, 77 and 78; also, p. 679.

ducts in the foreign markets. To be sure, foreign capital will in time flow into the country through private borrowings, but only after the domestic production has suffered a temporary diminution and, also, after a higher rate of interest has been paid by private borrowers. In case of an emergency such as war, the beneficent effect of a foreign loan is even more pronounced. Domestic industries are thereby given time to adjust themselves to new conditions, while the government need not wait for domestic production to satisfy its sudden abnormal demand for war materials of all kinds. Moreover, the inflation of currency and the abnormal rise in domestic prices are prevented because the commodities imported will be paid for by the proceeds of the foreign loan. The Allies obtained just such a benefit when the United States entered the World War and made large loans to them, although in that case of course the internal economic conditions of the allied nations were already badly disturbed, and the only thing the loans could do was to prevent their aggravation.

There are on the other hand some disadvantages in making foreign loans in times of emergency. In the first place, the temporary relief and plenty due to a foreign loan are liable to check the people from making a greater exertion and economy which they otherwise would have made. Nothing has a more wholesome effect on a country than for the people fully to realize the gravity of an emergency, be it a war or a natural calamity. In the second place, the interest rates of foreign loans are usually high in cases of emergency because of the lender's apprehension for the future condition of the borrower and because of the needy situation of the borrower.[1] This of course means that the future burden on the people will be heavy. In case of war, when a country's very existence is at stake, the government cannot afford to be swayed

[1] America's loans to the Allies were exceptions.

by such disadvantages. But in case of a natural calamity such as a deluge or an earthquake, if the task is to rehabilitate the country's parks, museums, capital buildings and the like, it is not necessary from an economic standpoint to resort to a foreign loan with a high rate of interest. If domestic capital barely suffices to regain the country's productive efficiency, social improvements can be made out of domestic capital as it gradually accumulates in the future. For these and other less important reasons,[1] which may be omitted, it seems to us that, as a general rule, foreign loans for exigencies should be resorted to only to the extent of preventing violent industrial disturbances in the transition from ordinary to extraordinary conditions and of giving an initial encouragement to the people, — a "handicap", as it were, given in an economic race with foreign countries.

When it comes to foreign loans for industrial undertakings in time of peace, the case is very different. If, for instance, a country wishes to develop its industries or to open up its natural resources but has not enough capital, there is — considered from an economic standpoint alone—no reason why it should not borrow capital from foreign countries. There are obviously two great advantages in such a loan. First, the rate of interest charged will be relatively low because the undertakings in question are sound business propositions. In the second place, the gains arising from the undertakings will far outbalance the sums of interest to be paid on borrowed capital. Especially will this be true in the case of developing natural resources. The countries in point are China, Russia, Mexico and the South American Republics.[2] Were it not for political considerations of both the would-be lenders and the would-be borrowers, there is no reason why those countries should not borrow all the capital they could

[1] Given by Bastable in his *Public Finance*, pt. I, sec. ii, pp. 79-80.

[2] Notice the recent endeavors of Soviet Russia to attract foreign capital.

from foreign countries, in order to open up their natural resources and to develop their industries. For, once their industries are established and developed, the gains that arise will be immensely greater than the temporary loss due to debt charges.

There is another point which has a very important economic bearing upon a country, although it is more directly of a political than of an economic nature. If a country borrows a large amount of money from another country there is likelihood that the creditor country will grant more readily what is known in international politics as a "most-favored nation" treaty. Wars, also, are more likely to be avoided, because international debts are often repudiated as a result of the severance of diplomatic relations. All these facts tend to the economic advantage of the debtor country.

We may come to the conclusion then, that foreign loans, provided they are made at a reasonable rate of interest, are advantageous to a country because they help to prevent industrial disturbance, inflation, and decrease of production at home in times of emergency; and that, in time of peace, they serve to develop domestic industries and to increase domestic production in general.

CHAPTER IV

Economic Effects due to the Purpose of the Public Debts

From our study of the views of modern writers, we may safely conclude that the purpose for which a public debt is contracted is the most important consideration of all. Upon this depends the justification or the condemnation of public borrowing. For what purposes, then, may governments contract loans? A philosophical discussion of this question would lead us to the consideration of the still larger problem of the scope of government activities and expenditures, present and prospective. That would lead us in turn to such a question as government versus private ownership of industries. We might include in such a discussion a survey of theories of national expenditures, represented on the one hand by such writers as Karl Dietzel, J. A. Hobson and the state socialists, or on the other hand by the proponents of individualism. But such a consideration would take us too far afield. We are justified, therefore, in limiting our study here to the purposes for which governments everywhere have actually contracted, or are actually contracting, loans. We shall, then, start with the assumption that the expenditures in question are justified, and that, in default of the loans, taxes must be used to defray them.

There are three purposes for which a government may rightly resort to public loans: One is to cover casual deficits; the second is to provide funds for emergencies, such as wars or natural disasters; and the third is to raise funds for commercial or non-commercial public investments. What, then,

are the effects of loans for these purposes as contrasted with the effects when taxes are applied instead? Let us take up the question in connection with each one of these purposes.

Borrowing for casual deficits: — It is a common phenomenon in the public finance of any government that, no matter how close the estimates made for income and outgo in any one year, there is always bound to be either some surplus or some deficit. The evil effects of surplus financiering[1] are so obvious from the financial history of the United States that we only need to say in passing that it is synonymous with extravagant financiering. For that reason, governments in all civilized nations always try to avoid as much as possible a large surplus in any one year except at times when they aim at using it for debt redemption (as at present in the United States). Under these circumstances, then, it is natural that a casual deficit, comparatively of small amount, should occur from time to time. Sometimes it may be due to the late receipt of taxes; at other times it may be due to the decrease in revenues on account of temporary business depression; or still again, it may be due to fresh expenditures following a new policy of government. In any case there must be an increase in revenue for the time being in order to defray the necessary government expenditures.

Should the government immediately increase the rates of taxation to face these temporary vicissitudes of revenue? In the first place, new taxes cannot at once produce the necessary increase in revenue, because it takes some time to "run" any tax, — even taxes on consumption. In the second place, even if the increased revenue is at once forthcoming, frequent changes in the rates of taxation are undesirable because they bring about an increase in the administrative expenses

[1] For a detailed discussion, see Adams, *Public Debts*, pp. 79-83; also, Dewey, *Financial History of the United States, passim.*

of the government, disturbances in the people's business calculations, as well as confusion, inconvenience, and other similar effects. It is, therefore, highly desirable as well as economical to resort to a temporary loan. If the cause of the deficit is a temporary business decline, the revival of business will make up for the decreased revenue. If the cause is a fresh expenditure following a new governmental policy, and if it occurs but once, it is better to resort to a loan than to attempt to raise the necessary funds by a sudden increase of taxes, because less disturbance will be brought upon industries.[1] If, however, the deficits continue year after year, it is the practice of most countries to resort to an increase in the rates of the so-called "elastic" taxes: income tax, or import duties on articles of common consumption, such as sugar, tea, coffee, etc. The reason for choosing them is that a slight increase in the rate of taxation brings in a large revenue without any appreciable disturbance in the general business relations of the people.

In local government finance, however, the advocates of the so-called "Pay-as-you-go Plan" are against borrowing even for a short term, because in their opinion it is unduly expensive to the government. A staunch supporter of the Plan, in refutation to an opponent of the Pay-as-you-go Plan, advocates the advancing of the date of tax collection so as to be nearer to the beginning of the tax year. According to him,[2] about 40 per cent of municipal loans are for short terms, most of them to finance the current requirements prior to tax collection. The annual cost of this policy to the cities, states and to the federal government must be extremely heavy. In its 1920 report the Special Joint Committee on Taxation and Retrenchment of the New York Legislature

[1] See Adams, *Public Debts*, p. 79.

[2] See T. D. Zuckerman, "The Pay-as-you-go-Plan is Cheaper," in *National Municipal Review*, Aug., 1924, pp. 430-440.

emphasized the expensiveness of such tax-anticipatory borrowings. In Utica, where taxes are due in September, the cost to the city of such a borrowing in 1919 was approximately $20,000; while, in Syracuse, the cost was $50,000. The comptroller of New York City estimated the cost of short-term loans in anticipation of tax at $3,000,000 annually. In 1924, the cost from the same cause was roughly $4,000,000. Before the present law was enacted, providing for semi-annual collection — one-half being payable in May—the cost of tax-anticipatory loans was approximately $5,000,000 annually, in spite of the fact that the budget then was much smaller than it is now.[1]

On the whole, loans for temporary deficits are more economical than taxation. Their advantages may be enumerated, as follows: (1) The rate of interest charged is usually very low; (2) capricious changes in tax rates are thereby avoided; (3) surplus financiering, which must be the alternative, is eliminated; and (4) all these facts together enable the current of business to run more smoothly than if taxes are regulated to suit the varying temporary needs of the government, be it local or national.

Borrowing for emergencies:—The most common of national emergencies is war. Should wars be financed by loans? If public loans were to be condemned as an uneconomical mode of financing wars, there are left two possible alternatives, namely, taxation and public treasure (war-chest, as the Prussian government called it). It is obvious that a modern war cannot be financed by the method of accumulating a public treasure, for the task at hand is to raise hundreds of millions of dollars within a few weeks. Even if a sufficient fund could be accumulated as a "war treasure", that would be an extremely uneconomical mode of war finance, because if the money lies idle in the treasure chest

[1] See *National Municipal Review, loc. cit.*, p. 431.

the loss of interest on it is great, while if it is invested in securities, those securities must be disposed of in the market just at a time when market conditions are most unfavorable. The "war-chest" system is now so universally condemned by writers on public finance that it is not necessary for us to discuss it further. Adolph Wagner is the last writer of importance to defend it.[1] The only alternative left is, therefore, taxation. The question of loans versus taxation for emergency financiering is still debated, and of late it has become especially important on account of the great World War. There are strong arguments on both sides of the question, and therefore, a careful study of these must be made before we can arrive at a judicious conclusion.

A. Arguments in favor of taxation policy for war finance: — A contention most frequently made by the opponents of the loan policy of financing the war, and perhaps the most powerful of their arguments, is that loans check economy on the part of the people. This result, according to them, is brought about in several ways. In the first place, whereas by taxation the buying power of the richer classes of people will be diminished so as to cut down their unnecessary expenditures, with loans they will feel better off and will not economize their consumption.[2] The reason for this is that, with taxation a person is deprived outright of a certain sum of money, while with loans he is given interest on the same sum together with the promise to have the sum returned at some future date. In case of need he can even sell the bond and realize the sum loaned to the government. In the second place, the richer classes of people will reason from experience that no tax system in the future will be high enough to consume the whole of the interest they will

[1] See his *Finanzwissenschaft*, 3rd ed., pp. 169-183.

[2] See Hartley Withers, *War-Time Financial Problems*, chaps. iii and iv. Also, A. C. Pigou, "The Burden of War and Future Generations," *Quarterly Journal of Economics*, vol. 33, pp. 242-55.

receive on their bonds. In the United States, tax-exemption of government bonds (as we have already seen in the preceding chapter) has even openly assured the bondholders that the interest they will receive will be one hundred per cent intact.

Another point advanced by the advocates of the policy of taxation is that the loan policy will lay a far greater burden on future generations. As already mentioned in the preceding paragraph, with loans the richer classes of people will economize less and will work less hard, which in other words means depletion of capital in one way or other.[1] The lessening of capital, or the prevention of its increase, results in turn in less national income in the future. To the extent that the richer classes of people bear a relatively smaller tax-burden in the future the poorer classes will suffer greater burden.

The third objection raised against the loan policy is that it will inevitably cause inflation of the currency. The inflation, it is maintained by the advocates of the taxation policy, is brought about by the people's purchasing of government bonds by means of bank credit. Theoretically, of course, public loans need not necessarily cause inflation of the currency, because the people could buy government bonds with their real savings. But practically, people are more likely to resort to bank loans partly because they feel themselves less deprived under the loan policy and hence do not work harder or save more than before, and partly because the bonds serve as good securities for bank loans.[2] If, then, inflation of the currency does take place as a result of the government's loan policy, its consequences are unfortunate.

[1] See *ibid.*, pp. 248-49. Also, A. C. Pigou, *Political Economy of War*, p. 77.

[2] See A. C. Pigou, *Political Economy of War*, p. 80. Also "Loans *versus* Taxes in War Finance," in *The Annals of the American Academy*, Jan., 1918, pp. 85, 97.

Prices will rise and the wage-earners and the people of fixed incomes will suffer from such a rise. Furthermore, the debtors will gain and the creditors will lose on account of the diminution in the purchasing power of money. It is contended further in favor of the policy of taxation that taxes in time of war are less felt and more willingly paid than in time of peace, because the demand for most articles is practically guaranteed by the needs of the war, while the spirit of patriotism, mingled with the feeling that war taxes are but temporary, enable the people to bear heavy taxes ungrudgingly. If, therefore, war expenses are paid by taxation, the nation will emerge from the war in a strong financial condition to enter again into economic competition with other nations.

Above are the chief contentions against the loan policy of financing a war.[1] Let us consider them in the light of the conditions which prevailed in the belligerent countries during the World War. In Great Britain the people of every class were ready at the beginning of the war to make any sacrifice, and it was therefore an opportune moment for the levying of higher taxes by the government. The adoption of the policy of borrowing, instead, completely changed their psychology.[2] Only a small minority with fixed incomes saw that they must economize because their real income was somewhat reduced by the heavy income tax, while they foresaw that the tax must soon be increased. The majority of the people, including wage-earners, only saw that wages were rising and employment was abundant. They had plenty of money to spend, and they spent it freely, encouraged further by the false commercial slogan 'business as usual'.[3]

[1] See *ibid.* Also, *Journal of Political Economy*, July, 1917 (vol. 25), pp. 889-916; also, pp. 857-887.

[2] See Hartley Withers, *War-Time Financial Problems*, chap. iii.

[3] See J. E. Allen, *The War Debt and How to Meet It*, London, 1919, pp. 11-12.

Thus, the refusal of the British government to impose heavy direct taxation in the early months of the war and its disbursement of borrowed money checked economy and brought about inflation and a universal rise in prices. Under such conditions the attempt of the government to bring prices down was futile at best; and at times it actually discouraged production. The war has been paid to a large extent by the owners of certain kinds of property, such as government and municipal loans, debentures and preference stock of every kind, or shares of public utilities and banks, because those securities have lost, on account of inflation, nearly half of their values.[1] Furthermore, in the case of the first two war loans a large proportion of the money subscribed was obtained through bank credit.[2]

What was true in Great Britain was also more or less true in other allied nations. The conditions of the Central Powers were even worse because of their almost exclusive reliance on loans. It is little wonder, then, that practically the whole middle class in the latter countries was financially wiped out by the war.

B. *Arguments in favor of the loan policy:* — The policy of resorting to loans for financing wars is not without its defenders.[3] They contend in the first place that public loans for a war are absolutely necessary and inevitable, because taxation is not sufficient to fulfill a sudden great demand for funds over and above those necessary to finance ordinary expenditures of the government. It is indisputable that the enhancing of the rates of taxation or the imposition of any new tax does not immediately increase revenues, as it takes

[1] See *op. cit.*, pp. 21-25.

[2] See *ibid.*, p. 48.

[3] Professors Seligman, H. C. Adams, Bullock and Hollander are notable representatives. They do not, however, contend for an *exclusive* loan policy.

some time before any tax becomes remunerative. It is argued sometimes that a large increase in the rate of some taxes even brings about an actual decrease in revenues. (However, this argument does not invalidate the effectiveness of taxation in general, for a judicious selection by the government of a certain number of 'productive' taxes will enable it to avoid that unfortunate result.) We have already seen that large short-term borrowings produce harmful economic consequences; and therefore, they cannot be solely depended on in anticipation of increased tax receipts. But the funds must be raised immediately, because the lack of funds in the government treasury means delay in the operations of war; and such a delay may mean unnecessary prolongation of war, if indeed, it does not spell defeat. Under these circumstances, the only means left for the government is to float a public loan. That is precisely the reason that the government of every nation always issues a large amount of bonds immediately after the declaration of war.

In the second place, a violent change in the rates of taxation will cause great disorder in industry and commerce, which will in its turn bring about a decrease of production. Needless to say, large business transactions are almost always based upon the business men's calculations of future prospects. A sudden and great change in tax rates upsets their calculations and causes them to narrow the field of their commercial activities, or in some cases, to abandon it altogether. In other words, the wholesale buyers in general will purchase a smaller amount of products than before, and the producers in their turn will have to decrease the volume of their output. To be sure, to the extent that the products concerned are those of luxury, the diminution of their production is to be encouraged; but when articles of consumption in general are affected, the decrease in their production will be dangerous to the national economy, to say nothing

of the danger of drying up the sources of taxation. Then again, it discourages the business class much more to impose heavy taxes on their actual and prospective earnings than to do the same after they are well on their way to a greater income. In the former case the business men are deprived of their initial stimulus, while in the latter case the optimism due to the initial encouragement which they have received by way of higher earnings will lead them on to ever greater activity.

In the third place, taxation takes money away from individuals without any regard to their condition at the time of payment, while loans enable them to withhold their funds when they are indispensable for the execution of the individuals' business, yet allowing the individuals to lend to the government when they come in possession of disposable money. To put it another way, loans take the individuals' funds when and where they are most dispensable. This is a great benefit for business men, because there are times when every dollar they possess is needed for business. On the contrary, at times they may have plenty of idle money on hand with which they could buy government bonds. In case they need money again they could easily sell the bonds in the market.

There are also other less important disadvantages of taxation such as administrative difficulties encountered in levying very heavy taxes and undue privation of the taxpayers. Loans, on the other hand, avoid all the above difficulties, and if a large enough fund is raised by taxation to pay interest on loans and a small sum for sinking fund, and if taxes are levied equitably after the war to pay the debts, loans are far preferable to taxation in financing a war.

From the foregoing exposition of the various arguments on the question of 'loans versus taxes' for the financing of war, two things have been made clear. In the first place,

the choice of loans or taxes is the choice between two evils, because — the purpose for which either is resorted to being outright destruction — the economic effects in either case are harmful. There is, then, no panacea. In the second place, the issue is not all taxes or all loans but most-taxes-with-some-loans or most-loans-with-some-taxes. Therefore, we are to judge whether the economic effects due to the resort to predominant taxation with supplementary loans is less injurious than chief reliance upon loans with subsidiary reliance upon taxation.

Undoubtedly there are several great evils arising from the resort to a predominantly loan policy. First of all, it seems to be indisputable in theory and in fact that the chief reliance upon great loans at the beginning of a war is sure to check to a large extent the spirit of economy among the people, — the more the validity of the argument can be sustained that the subjective burden of the people can be shifted to the future, the more that truth can be attested. Secondly, in practice at least, the resort to loans chiefly is sure to bring about inflation of the currency, with its train of consequent evils. The examples of the Central Powers, of France and to a great extent of Great Britain during the World War, clearly prove the point. Inflation, to be sure, may not be the necessary result of a loan policy, but the fact seems to be that, under the present credit system of the civilized countries, once the government resorts to great loans, it cannot quite control the financial policies of the people so as to check entirely the so-called "credit" loans. Thirdly, since after all a greater part of the costs of the war is for the time being paid by the richer classes of a country, the chief reliance upon loans is sure to mean that a relatively greater part of the war expenses is paid by the poorer classes after the war than if taxes had been chiefly relied upon. This also may not necessarily be the case. But the fact seems to

show that in any capitalistic country the payers of large taxes (in other words the richer classes of society) are more sure to make effective their clamor for relatively lower taxes, after the war than during the war.

Shall we then favor the policy of most-taxes-with-some-loans rather than that of most-loans-with-some-taxes? The answer cannot be made so readily, because there are several great disadvantages to the policy of chief reliance on taxation. In the first place, speed and effectiveness being essential to war finance, from the standpoint of expediency alone, it is inadequate, or almost impossible, to finance a great war mainly by taxation. The following table clearly shows the extent of the cost of a modern war: [1]

Several billion dollars may be raised by loans within a few days, but the same sum cannot be raised by taxation within a few months without a serious disturbance of the business relations of the people. The question involved is not only financial but also truly economic, insofar as the successful conclusion of a war (that is, victory) produces a far more favorable economic effect upon a country than its unsuccessful conclusion (that is, defeat).

In the second place, as Nebenius,[2] and later Dietzel, said many years ago, one of the greatest advantages of a loan is that it takes the money out of the pockets of those who can best dispense with it. For instance, a bachelor workingman may have but $500 cash in the bank, yet he may more readily be able to lend it to the government than a manufacturer who has $50,000 invested in a factory. In other words, regardless of the amount of wealth possessed, loans — far more effectively than taxation — collect the money which is least indispensable to the people for the time being, because loans are voluntary while taxation is compulsory. The subjective burden is slight under loans, while under taxation it is heavy.

[1] As given on the following page.

[2] See under "Nebenius" in Chapter I of this thesis.

Money Cost of the Great War (1914–1919) [1]

(In dollars—000,000 omitted)

Entente Allies	I At par of Curren-cies	II Adjusted to 1913 purchasing power of Currencies	% total on 1913 basis	III Popu-lation 1920	Cost per capita 1913 basis	IV Pre-war National Wealth	Cost 1913 basis (Col. II) Per cent National Wealth (Col. IV)
France	$37,588	$12,430	19.73	38	327	$57,900	21.5
Italy	14,794	3,391	5.38	36	94	21,600	15.7
Russia	20,500	7,913	12.57	170	47	60,000	13.2
United Kingdom	48,944	20,030	31.80	46	434	70,500	28.4
United States	33,456	14,969	23.77	106	141	200,000	7.5
Other Active Partici-pants	8,500	4,250	6.75	86	49	30,000	14.2
Total	163,782	62,983	100.00	482	131	440,000	14.3
Deduct Inter-Ally Loans	23,658	9,100					
Net Total	140,124	53,883	......	482	112	440,000	12.2
Central Powers:							
Germany	49,362	19,316	64.04	61	317	80,500	23.9
All other	33,985	10,846	35.96	79	137	38,000	28.5
Total	83,347	30,162	100.	140	215	118,500	25.5
Grand Total	223,471	84,045	......	622	135	558,500	15.0

In the third place, taking a broad view of the country as a whole, in spite of all criticisms against the war-profiteering of the rich, their selfishness and extravagance, etc., it is economically more profitable to the whole country to keep their ardor for economic production at the highest pitch, be-

[1] This table was copied from "French Public Finance in the Great War and Today," *Bankers Trust Co. Publications*, p. 11—H. E. Fisk.

cause by their maximum effort at production the rest of the country will also profit. But the facts tend to show that this can be accomplished only by loans and not by the excessive taxation otherwise required. It is needless to repeat here the various other points raised in the preceding survey.

From the above considerations it is obvious that neither an exclusive loan policy nor an exclusive taxation policy can be followed by any government without encountering serious difficulties. An exclusive loan policy has always failed in the past under a severe test because of the following reasons: First, public credit depends mainly upon the ability and willingness of the government to support its loans by adequate revenue from taxation; consequently, when the latter is not provided, government credit is bound to be impaired. Secondly, if the rate of taxation is not increased considerably in time of war, people will not curtail their expenditures, and the government will have to compete with private bids to purchase its war supplies, — the result being high prices and inflation. Thirdly, the security of government loans being inversely proportional to their amount, their accumulation to an enormous amount makes the lending public apprehensive of their future condition, and hence public bonds become unattractive. The only way the government can borrow under those circumstances is to pay very high rates of interest, which, of course, increases the public burden still more.[1]

On the other hand, exclusive reliance on taxation in time of a war will be fatal to the government. If the government tries to raise as much by taxation as by loans, it will have to tax the people in such a way as to amount to a virtual confiscation of private properties beyond those necessary for subsistence. To say nothing of the administrative difficulties of such a policy, it will discourage industry to such an extent that national economic power will be destroyed.

[1] See *Quarterly Journal of Economics*, May, 1917, pp. 357-79.

Taking all in all, we consider that the policy of most-loans-with-some taxes for financing a war is conducive to more favorable economic effects than the opposite policy.

Emergencies other than war: — What has already been said in favor of chief reliance upon loans for war finance holds equally good, generally speaking, for financing emergencies arising from natural calamities such as floods and earthquakes. We have no authorities to quote who have written specifically on this subject, but those who have written on emergency financiering seem implicitly to include floods, earthquakes, etc., with wars, under the word 'emergencies'. It seems to us, however, that the financing of these two kinds of emergencies (natural calamities and wars), and their economic effects, are somewhat different and that, therefore, it is necessary to treat them separately.

In the first place the natural calamities do not recur so "regularly" as wars. History seems to show us that they occur at very long intervals rather than at short intervals. In the second place, with them the loss of human lives is far less than in wars, because it is very improbable that the whole country will be physically affected by natural calamities. In the third place, unlike the periods of war, such emergencies involve no far-reaching change in the direction of productive energies. The question is rather one of the gradual increase in production all round. And finally, unlike war funds, the money raised in case of a natural calamity is not wasted in outright destruction but is expended in durable and productive goods. For these reasons, loans for 'natural' emergencies seem to us to come halfway between loans for war and loans for public investments. That is to say, loans for 'natural' emergencies can and should be of very long terms, with proper provisions for their gradual repayment. As rehabilitation gradually progresses, the government can repay the borrowed money out of the proceeds of the rehabilitated

properties as well as from taxation on the rest of the country. In that way the general industries of the country are least disturbed and the "savings" loans are most effectively obtained.

Loans for public investment: — Many authorities[1] on public finance justify and approve of loans for public investment for the following reasons: *First,* it is not possible to proceed slowly with public works such as railways, levees, dredging of rivers and harbors, etc., because interrupted work means loss from wear and tear on the unfinished parts on the one hand, and from idle investment (until the work is completed) on the other. The only alternative to borrowing is taxation. But sudden heavy taxation is contrary to a sound rule of public finance, because it causes serious disturbance of business relations and is a heavy burden on industry. With loans the payments can be spread over a series of years in the manner of installments, and any serious industrial disturbances or serious changes in the form or the rate of taxation are thus avoided. *Second,* if the public investment is industrial in character, the revenues arising therefrom should support the expenditures made, and therefore loans are justifiable.

In recent years the great expansion of public works by the local governments in the United States, especially by municipal governments, has evoked a lively discussion as to the proper methods of financing public works. More recently this discussion has taken place under the subject of the so-called "Pay-as-you-go-Plan". As its name indicates, the 'plan' is nothing other than a taxation policy. Those who advocate the plan mention the alarming growth of municipal debts, the extravagance and mismanagement of public officials, the imposing of heavy burdens on future genera-

[1] See H. C. Adams, *Science of Finance*; also his *Public Debts.* E. R. A. Seligman, *Essays in Taxation.*

tions, and the like. Those who are against the plan, that is, the defenders of the borrowing policy, argue that the States and municipalities enjoy greater credit than private corporations and individuals. Therefore, the former are able to borrow money at a much lower rate than the latter. If the pay-as-you-go plan is used in making public improvements, the taxpayers have to advance the money immediately to the full value of the improvement. If on the other hand the borrowing method is used, the apparent cost to the taxpayers is the full value of the improvement plus the interest charge. But the real cost to the taxpayers under the serial-bond borrowing plan (for that is the kind of bonds now generally advocated by these writers) is less than the full value of the improvement, — less the amount of the difference between the interest earnable by the taxpayers and the interest paid by the State or the municipality. In other words, the money temporarilly saved in the pockets of the taxpayers will more than earn and pay for the principal and interest of the public debt. Furthermore, if the only improvements made are those that can be financed by current income alone, there is a grave danger that the cities and States will have to forego numerous urgently needed improvements, merely because the people cannot at once stand the strain of the requisite tax. The pay-as-you-go plan does not take into account the productivity of wise public improvements which pay, or more than pay for themselves.[1]

The idea that the money payable by the people as taxes will — if left in their pockets — earn more than the interest paid by the government must be considerably modified. It is true, to the extent that some people invest this money in productive undertakings, they will earn more than the interest paid by the government. However, as a matter of fact a large portion of the money collectible as taxes will, if

[1] See *National Municipal Review*, June and August numbers, 1924.

not taken by taxation, be spent by the people in consumption. If people spend the money in a wasteful manner, the social productive power is lessened to that extent. But, of course, just how much money will be thus expended it is not possible to say.

Professor C. K. Sumner defends the borrowing plan from another point of view.[1] His argument is to this effect: The increase in population is in general progressive. The excess of tax burden on account of the bonds is therefore not as heavy as the advocates of the pay-as-you-go-plan represent. But a high rate of increase in population usually brings extraordinary demands for improvements and affords a strong stimulus to progress. Public borrowing is a legitimate means of promoting this stimulus, and if wisely regulated its cost is moderate. The use of public credit is therefore sound in principle, but it should be duly regulated in the interest of future as well as present progress. He finally says that the pay-as-you-go-plan would enable us to enjoy a more steady but a much more conservative rate of improvement.

Against all these arguments in favor of the borrowing plan the advocates of the pay-as-you-go plan advance a rejoinder. They argue that the average taxpayer earns from the money temporarily saved by the borrowing plan far less than is stated by the advocates of the borrowing plan. If the taxpayer is to invest the sum in safe securities or banks, the earning will not be above 3½ or 4 per cent per annum. If invested in current business or in ordinary securities, the risk is greater in proportion to earnings. Besides, the assumption often made that the taxpayer has to resort to borrowing in order to meet his tax obligations is fallacious, because the average taxpayer regards his annual taxes as one of his necessary expenses. Again, the enormous increase in public

[1] See *ibid.*, January number, 1925.

debt will so impair or weaken the credit of the government that the rate of interest on its bonds will inevitably rise. And finally, in reply to the assumption that the government could make a good financial investment, it is argued that governments exist, not to make investments and create wealth, but to protect life and property, to preserve order and to promote general welfare.

In order to be able to render a fair judgment upon the foregoing discussion let us now turn our attention to some of the important statistical facts bearing upon the actual indebtedness of the local governments in recent years. Dr. L. W. Lancaster, who has been making an exhaustive study of the recent trend in local expenditures, presents the following facts:[1]

TABLE III—TOTAL ISSUES OF STATE AND LOCAL LONG-TERM OBLIGATIONS, 1912-1923[2]

Year	Total Issues
1912	$386,551,828
1913	403,246,518
1914	474,074,395
1915	498,557,993
1916	457,140,955
1917	451,278,762
1918	296,520,458
1919	691,518,914
1920	683,188,255
1921	1,199,616,561
1922	1,101,917,313
1923	1,032,390,604

These increases, although many are disposed to view them with alarm, are not difficult to explain. . . . Not only did urban population increase steadily, but the price level more than doubled be-

[1] See his article "The Trend in City Expenditures, *Annals of the American Academy*, vol. 113, pp. 15-22, May, 1924.

[2] *Supra*, pp. 18-19.

tween 1913 and 1920 and the wages of skilled and unskilled labor entering into construction work rose sharply during the same period. These are general causes which are suggestive in explaining the apparent huge increases in borrowing.[1]

TABLE IV—PERCENTAGE OF TOTAL STATE AND MUNICIPAL SECURITY ISSUES DEVOTED TO SPECIFIED PURPOSES, 1912-1922 [2]

Year	Refunding	Water	Streets and Bridges	Sewers and Drains	Schools	General Buildings	Parks and Museums	Gas and Electric Light	Funding and Improvements	Miscellaneous
1912	3.85	15.48	23.13	6.72	11.79	7.93	3.43	2.00	4.76	20.91
1913	6.70	12.22	26.87	6.53	13.72	10.31	2.22	0.82	5.06	15.56
1914	1.97	11.95	30.94	6.86	13.27	9.26	1.70	0.74	3.29	20.02
1915	6.44	8.90	27.29	6.30	16.09	6.60	2.00	1.69	5.01	19.68
1916	5.13	8.42	31.16	5.14	15.37	6.08	1.92	0.67	4.02	22.09
1917	3.40	6.30	29.16	7.24	13.35	5.74	2.35	1.48	4.94	26.04
1918	3.27	13.62	22.22	12.02	14.07	4.04	0.84	1.33	8.64	23.22
1919	1.93	8.00	42.81	5.60	14.92	3.59	1.12	1.47	6.98	13.58
1920	1.67	7.95	31.64	5.80	19.00	3.71	2.63	1.74	7.37	18.49
1921	..	6.57	32.51	6.06	17.96	3.44	1.85	1.19	7.93	13.91
1922	2.71	8.50	31.21	8.30	21.53	3.64	1.76	2.51	6.92	9.22

This table shows, as might be expected, that by far the larger part of municipal borrowing has been for streets and bridges, schools, water supply and sewers. These purposes together account for practically 70% of all borrowing. In the field of elementary and secondary education it is a matter of common knowledge that within the past 20 years revolutionary changes have taken place in school architecture and curricula which have led to the wholesale scrapping of equipment and necessitated new and costly plants.[3]

[1] *Supra*, p. 19.

[2] *Ibid.*, p. 20.

[3] *Ibid.*

TABLE V—TOTAL ISSUE OF MUNICIPAL AND STATE LONG-TERM OBLIGATIONS WITH PERCENT OF TOTAL ISSUED BY EACH GOVERNMENTAL UNIT, 1911-1920[1]

(000 omitted)

Year	Total issued	States	Counties	School districts	Cities, Towns Villages
1911..........	$396,859	11.83%	12.16%	7.71%	68.30%
1912..........	386,551	8.80	13.12	8.18	69.90
1913..........	403,246	12.94	15.27	8.43	63.36
1914..........	474,074	15.37	13.77	8.30	62.56
1915..........	498,557	12.23	15.70	10.97	61.10
1916..........	457,140	9.32	22.84	11.29	56.55
1917..........	451,278	11.66	18.23	9.94	60.17
1918..........	296,520	13.05	20.73	8.53	57.69
1919..........	691,518	10.76	32.78	11.19	45.27
1920..........	683,188	12.82	19.67	14.87	52.64

The above figures show that there was, on the whole, a fairly steady decrease in the relative volume of securities issued by cities, towns and villages, and a relatively steady increase for counties and school districts. "Further analysis of these figures shows that during the last five years of the period the responsibility for increased indebtedness rested entirely with the public quasi-corporations of the country—state and city issues showing actual decreases in their proportion of the total." [2]

Dr. Lancaster concludes from the above study that the increase in city expenditures during the last few years is more apparent than real when we take into consideration the lowering of the value of money (or what is the same thing, the general rise in prices), the rapid increase in urban population, and lastly, the increased demand for new and better services on the part of the people.

[1] *Supra*, p. 20.

[2] *Ibid.*, pp. 20-21.

> Between 1913 and 1920 the index number of wholesale prices of all commodities rose from 100 to 226; by the end of 1922 it stood at 149. . . . Although a large part of city costs are for labor and services, it would seem safe to say that the increased cost of such services would, if anything, increase the disparity between the earlier and the later figure.[1]

Dr. Lancaster also shows us the figures indicating an enormous rise in prices of those materials which are especially used in large quantities by cities, such as lumber, brick, structural steel, etc. As to the growth in urban population, he says:

> In 1912 there were in the United States 195 cities with populations in excess of 30,000; in 1922 there were 251 such cities with an aggregate population of more than 37,000,000. The need for many city functions increases usually at a considerably greater rate than the population. This is seen most readily in the case of education, transportation and utilities generally, and in health and sanitation.[2]

And lastly, he adds: "A third factor contributing to the increase in the money cost of government is the undoubted demand of the people for the assumption by their government of new functions and the more efficient administration of long established functions."[3] And to corroborate his statement, he quotes from the "Report of the Iowa Joint Legislative Committee on Taxation, 1923."

However, the seriousness of the financial situation in many of our important municipal governments can be seen from the fact that, of the 80 cities in Ohio State, 54 required for sinking funds between 30 to 60 per cent of their total levy of taxes for city purposes in 1919; in 1920 there were 35 cities (out of 80) which required from 50 to 70 per cent, as

[1] *Supra*, p. 21.

[2] *Ibid.*, p. 22. [3] *Ibid.*

against 28 cities in 1919.[1] The St. Paul Bureau of Municipal Research published in 1922 a study which showed that, with a deficit of $1,163,116 in the sinking funds, 19 cents of the tax dollar was required for debt charges. Figures published in "Kansas Municipalities" for April, 1922 show that 33.67 per cent of all taxes levied for local purposes in the cities and towns of that State were required for debt charges during 1921. Since 1920 the net debt of Detroit has increased 259 per cent, while increases in population and assessed values have been negligible.[2] In California the municipal bonded debt increased from $65,573,033 in 1911 to $149,611,830 in 1921,—an increase of 128.3 per cent, while during the same period the increases in population and assessed valuation of taxable properties were only 53.3 per cent and 85.3 per cent, respectively.[3]

The attitude of the financiers of local governments, as indicated by their various recommendations, seems to show the more or less general existence of one or several of the following conditions in many of our typical cities:[4] (1) A shortage in the sinking fund, due to application of the fund to current expenditures; (2) the need of issuing serial bonds, instead of term bonds in the future, in order to secure payment of the debt; (3) the need of putting some of the capital improvements on a "pay-as-you-go" basis; (4) the need of limiting the terms of bonds to the life of the improvements; (5) the need of first determining the kind of improvements to be made, and their costs for a definite period, before resorting to the issue of bonds.

[1] See Lane Lancaster, *State Supervision of Municipal Indebtedness*, Table V, p. 11.

[2] See *ibid.*, p. 13.

[3] See *California State Controller's Annual Report of the Financial Transactions......*, 1921.

[4] See C. E. Rightor, "Review of Reports on Funded Debt of Cities," *National Municipal Review*, vol. xi, 1922, pp. 385-389.

Various State constitutional provisions as well as general laws for the supervision of local indebtedness throw much light on the condition of local debts. According to Dr. Lane W. Lancaster,[1] 26 States have the following constitutional restrictions:

(1) *General percentage limitations:* that is to say, the municipal governments should not borrow more than a specified percent of the assessed value of properties within their respective jurisdictions. Fifteen States prescribe limits of 5 per cent or less; nine States, between 5 and 10 per cent; two States, more than 10 per cent. However, with the exception of South Carolina, this provision is useless, since other 'districts' (such as school, county, etc.) borrow on the basis of the same properties.[2]

(2) *Borrowing beyond the debt limit* is allowed only for revenue-producing utilities or such indispensable works as sewers; moreover, the question must be put to referendum unless the undertaking is self-supporting when once started.

(3) *Requirements for redemption of debts:* Seventeen State constitutions make mandatory the raising of taxes sufficient to redeem debts. Most of them impose maximum maturity limits for loans, ranging from 15 years in Colorado to 50 years in New Mexico.

(4) *The authorization of borrowing:* Thirty-six State constitutions deal with local debts. Of these, sixteen require some sort of popular approval of a bond issue. The initiative, however, is everywhere left in the hands of the governing body. In 20 States no provision for referendum is made.

The above writer voices his opinion as follows:

While it is true that the danger of wastefulness is never far distant in democratic governments it cannot be denied that

[1] See his article "State Supervision of Local Indebtedness," *National Municipal Review*, vol. xiii, March, 1924.

[2] On this point, see Lutz, *Public Finance*, chapter on local debts.

financial practices have become so flexible that to deal with the details of local financing in such a slowly-changing instrument as a state constitution seems now to be unwise. . . . Ordinary legislation offers a much more adaptable means of dealing with such matters.[1]

General laws (statutory provisions) have aided in the work of control of local debts. Among the more important are the following: (1) With the exception of Nevada, New Jersey, Mississippi and North Carolina, referendum on local loans is required by general laws in all States. (2) The principles (a) that the life of bonds should not extend beyond the life of the improvements for which they are issued, and (b) that the loans should be repaid in regular installments (serial plan) rather than in totality at their maturity, are being adopted; 18 States expressly permit or make mandatory the use of the serial plan of debt repayment. Of these ten have mandatory laws; they are: California, Colorado, Louisiana, Massachusetts, Mississippi, New Hampshire, New Jersey, North Carolina, Ohio and Vermont. Of 48 States, 38 have general laws specifying limits within which local debts must be paid or refunded. The laws of about two-thirds of the states provide merely for maximum periods within which debts must be paid. A small, but in recent years increasing number of states have enacted legislation based upon the principle that the obligation by the issue of which an improvement is financed should be retired within the life of the improvement. These are: Massachusetts, Ohio, New Jersey, New Hampshire, North Carolina and Wyoming. (3) Of 48 states, 19 make some provisions for the registration with a state authority of data pertaining to local indebtedness. The advantages of this are: (a) Valuable information is given to the investors, (b) service is rendered the State as a guide to formulating its policy

[1] *National Municipal Review, loc. cit.*, p. 159.

towards the finances of its subordinate governments, (c) the tax-payers are benefited.

However, the legislation in general seems to lack co-ordination in such matters as debt limits and taxing methods, assessment bases, overlapping districts and administrative machinery.[1]

Massachusetts has developed the best organized system of local financing by a series of laws enacted during the past fifteen years. The chief features of these laws are: (a) Borrowing for current expenses is prohibited. (b) Temporary borrowing in anticipation of tax receipts is placed on a scientific basis. (c) With regard to permanent indebtedness, the principle is recognized that debts should be paid back within the life of the improvement, and maturity limits are set with reference to proper distribution of the burden of repayment. (d) A serial plan of redemption is adopted, thus eliminating the administrative difficulties of sinking funds and promoting a fair distribution of the burden. (e) The bonds of the 316 towns of the State are issued *subject to the certification of the Director of Accounts.* (f) The auditing function of the Division of Accounts — the present laws provide for an audit of the accounts of all the subdivisions of the State at least every three years — is an invaluable part in the practical administration of the Massachusetts program.

The beneficial results of the Massachusetts legislation cannot be doubted. Since its enactment, practically every community in that State has been placed on a pay-as-you-go basis. New Jersey, New Hampshire, and Ohio have already followed the example set by Massachusetts.

According to a government report, the aggregate net indebtedness of all civil divisions reporting (in 1913) was $3,475,954,353. Of this sum, $371,528,268, or 10.7 per

[1] *National Municipal Review, loc. cit.*, p. 162.

cent, represented obligations for which the counties were liable; the cities, villages, townships, precincts, etc., were obligated for $2,985,555,484, or 85.9 per cent; and the independent school districts, for $118,870,601 or 3.4 per cent of the total debt. The net debt reported in 1913 represents an increase of $1,845,884,743, or 113.2 per cent, over the amount reported in 1902. During the period 1890 to 1902 the net indebtedness of all civil divisions increased $704,080,007, or 76 per cent. The per-capita debt was $35.81 in 1913, an increase of $15.07, or 72.7 per cent, since 1902, while during the period 1890 to 1902 the per-capita debt increased $5.95, or 40.2 per cent. Thus, while the net debt increased 113.2 per cent from 1902 to 1913, the per-capita debt increased at about two-thirds this rate.[1]

According to the Bureau of the Census Report for 1922, the total gross debt of all civil divisions in 1922 was $7,754,196,000.[2] The per-capita debt was $71.32, an increase of $35.51, or 99 per cent, over the figure of 1913. The aggregate net obligations of the cities, villages, townships, etc., were $3,951,222,000, — an increase of nearly one billion dollars over the figure for 1913.[3] When we consider the above figures and those in the preceding paragraph in conjunction with the figures given in the following table, we see that the debts of the local governments have increased at a more rapid rate during the last fifteen years than have wealth and population; or, in other words, the burden of indebtedness of the people has been increased. The table follows:

[1] "Wealth, Debt and Taxation, 1913," *U. S. Dept. of Commerce, Bureau of the Census Report*, vol. i, p. 240.

[2] See *Bureau of Census Report on Wealth, Public Debt and Taxation*, 1922, pt. ii, p. 2.

[3] See *op. cit.*, p. 115.

WEALTH AND POPULATION OF THE UNITED STATES, 1890-1922 [1]

Year	Population	Estimated Wealth	Per capita Wealth	% increase over preceding figure population	% increase over preceding figure wealth
1890	62,947,714	$65,037,091,197	$1,033		
1900	75,994,575	88,517,306,775	1,164	20.7	36.1
1910	91,972,266	187,739,071,090*	2,041	21.0	112.0
1922	108,740,000†	320,803,862,000	2,952	18.2	70.8

* Estimated wealth for 1912. Figure for 1910 not available.

† Approximate number, estimated from Table I of "Estimates of Population of the U. S. by States and Cities, 1910-1923 ...," *Bureau of the Census.*

Elaborate statistics of the bonded debt of large cities for 1923, 1924 and 1925 are given by Mr. C. E. Rightor of the Detroit Bureau of Governmental Research, indicating the enormous amount of borrowings in recent years by our cities, and their tendency to continued growth.[2]

The recent tendency of the States to increase their indebtedness is just as unmistakable as in the case of local governments. A few facts will suffice to show this increase. An analysis of the dates of issue of state securities at present outstanding shows that almost one-half the existing debt has been incurred since the United States entered the war, and over a third since the beginning of 1920. Since April 6, 1917 there has been issued a total of $518,997,414.20 of the securities now outstanding and since January 1, 1920, a total of $384,899,997.53.

[1] Compiled from following sources: "Wealth, Debt and Taxation, 1913," *U. S. Dept. of Commerce, Bureau of the Census,* vol. i, p. 21; same for 1922, pt. ii, p. 2, Table 1; *Fourteenth Census of the U. S.,* vol. i, p. 14.

[2] See *National Municipal Review,* May, 1923, vol. xii, p. 245; June, 1924, vol. xiii, pp. 360-4; June, 1925, vol. xiv, pp. 370-4.

All of the outstanding bonds of Arkansas, Illinois, Iowa, Michigan, Ohio, South Dakota, Washington and West Virginia were issued since this country entered the war, and Oregon's present debt dates no further back than January 1, 1917. Of the States mentioned, the debts of Illinois, Iowa, Ohio and Washington were incurred since January 1, 1920. These figures well reflect the tendency in recent years of the States to assume responsibility for large improvements and welfare measures and to finance them by means of long-term securities.[1]

The purpose of these state borrowings is largely for permanent improvements.

The construction of highways and bridges is by far the leading single purpose for which the outstanding debts were incurred, over a third of the total debt of the States having been contracted for this purpose. The total of $367,687,100 which represents the value of securities to finance these highways, is further significant when it is remembered that the development of State highway systems is comparatively recent. . . . Among the noteworthy highway systems financed by large bond issues are those of California ($55,000,000), New York ($100,000,-000), Oregon ($31,700,000) and Pennsylvania ($50,000,000). Waterways and harbor improvements come second in the list of purposes with a total of $213,891,400 or 20 per cent of the aggregate debt. . . . The paternalistic experiments of the agricultural States are reflected in the $45,156,139.39 total classified as "agricultural aid"—representing 4.2 per cent of the aggregate. . . .[2]

[1] See *A National survey of State Debts and Securities*, published by The Bank of America, N. Y. City, 1922. (The book is not paged.)

[2] *Ibid.*

THE PURPOSES OF STATE INDEBTEDNESS [1]

Purpose of Debt	Amount Outstanding (1922?)	%
Highways	$367,687,100.00	34.3
Waterways and harbors	213,891,400.00	20.0
Soldiers' Bonus	130,022,000.00	12.1
Funding operations	118,557,513.42	11.0
Other improvements	101,550,561.00	9.5
Agricultural aid	45,156,139.39	4.2
Public buildings	20,254,523.28	1.9
Welfare institutions	19,710,750.00	1.9
Miscellaneous	19,331,406.68	1.8
Other military purposes	18,440,810.07	1.7
Education	16,904,282.44	1.6
Total	$1,071,506,981.28	100.0

The steady increase in the indebtedness of the States is shown in the following table.

NET DEBT OF STATES 1915-1924 [2]

Year	Net debt at close of year	Per capita
1915	$424,154,647	$4.31
1916	459,661,269	4.59
1917	501,943,386	4.93
1918	502,492,713	4.86
1919*		
1920†		
1921	298,124,428‡	5.41
1922	879,075,619	8.12
1923	955,584,105	8.72
1924	1,183,467,433	10.64
1925	1,248,602,336	11.09

* Not available.

† Not published.

‡ As reported for 30 States.

[1] The Bank of America, *op. cit.* Also for detailed analysis, State by State, see its remaining pages.

[2] Compiled from: "Financial Statistics of States," *Dept. of Commerce,*

Coming now to the debts of the national governments, we may note that they are — as already seen in the previous chapters — for the most part the result of wars. Yet in comparatively recent years the national governments have gradually begun to incur debts for the purpose of investments. The most recent example is the building of the Panama Canal by the United States. Over $353,000,000 was borrowed for this purpose. In Germany and Austria-Hungary (before the World War), in Russia, Italy and Japan at present we find by far the greater part of the railroads owned and successfully operated by the national government. Vast amounts of debts have been incurred for them. The day may not be far distant when the railroads in Great Britain and the United States will be owned by the national government. In almost all the advanced countries of the world, large tracts of forests are owned by the national governments. Roads and highways, bridges and dams are also built in increasing measure by the state. These and similar projects are suitable objects for which borrowing is necessary and justifiable, because they are permanent investments which yield tangible incomes. They are truly profitable investments.

From the foregoing survey we may reach the following conclusion: Whether debts be local or national, insofar as they are due in part to unproductive undertakings, extravagance or mismanagement, the result is an economic loss. But a greater part of the borrowing is undoubtedly for approved and necessary expenditures conducive to permanent public benefit. And since there is nothing inherently

Bureau of the Census, 1915, Table 24, p. 119; same for 1916, Table 24, p. 121; same for 1917, Table 24, p. 121; same for 1918, Table 24, p. 117; same for 1919, ——————; same for 1921, Table 11, p. 39; same for 1922, Table 13, p. 74; same for 1923, Table 20, p. 130; same for 1924, Table 20, p. 128; same for 1925, Table 18, p. 122.

CHAPTER V

Economic Effects Due to the Redemption of Public Debts.

A. Repudiation: — Why should a government pay back its debts at all? Had it not been for the post-war situation in Europe the question of repudiation would hardly deserve mention here, for the last forty years had afforded abundant proof of the evils of this policy. An admirable account of the repudiation of State debts in the United States is given by William A. Scott in his book, *Repudiation of State Debts* (1893). Here we learn that the repudiating States had their credit completely shaken by the act, and for years they suffered from its evil effects, as registered in the abnormally low prices of their securities.

The chaotic economic conditions in Germany, Austria, Hungary, France, Russia, and to a less extent in Italy after the World War were largely due to the virtual repudiation of their state obligations, for the unlimited issue of irredeemable currencies in those countries was only a disguised repudiation. The first three countries mentioned above are on the road to a gradual recovery through outside financial aid and internal governmental efforts. Russia, alone, still presents a good example of the credit status of a repudiating nation.

It is a well-known fact that the core of the Russian problem, as it presents itself to the world today, is the question as to how Russia is going to act toward the question of her foreign credits.[1] It is universally admitted by business men

[1] See, for example, "Russian Debts and a New Loan" by Leo Pasvolsky and H. G. Moulton, in *The New Republic*, vol. 38, pp. 278-80, May 7, 1924.

and economists that Russia must have loans for the purpose of rehabilitating her economic life, shattered as it was in the last decade as an aftermath of the great war and the revolution. But the possibility of foreign loans is complicated by the crushing weight of Russia's debts of the past and by the Soviet Government's stubborn attitude toward the question of recognizing Russia's debt obligations to foreign countries. In other words, no country is willing to make any loans to her while the Soviet Government persists in its equivocal attitude toward redeeming her previous debts. It is a well-recognized principle that a debtor country must have an excess of exports over imports if foreign debts are to be paid. But in the case of Russia today, in order to enable her to stand on her own feet, she must first be given financial aid in the form of a large reconstruction loan. As aforesaid, however, loans are not forthcoming to her because she is still unwilling to abandon her repudiation. What little money Russia is able to obtain through the sales of confiscated royal treasures and through the small favorable balances of trade from time to time is aiding her slowly to economic recovery; but these are infinitely less powerful as agents of economic reconstruction when we compare them with huge foreign loans at a relatively low rate of interest. Witness Germany's rapid economic recovery since the establishment of the Dawes Plan.

From these and other considerations (which are more political than economic), we are forced to the conclusion that repudiation is unwise for any state from the standpoint both of expediency and of abstract justice. In the case of national repudiation of foreign debts the resulting friction and the ill-feeling between them might lead the creditor and the debtor nations to non-intercourse, or even to war.

B. Repayment: — In discussing the repayment of public debts we must not speak of all debts indiscriminately. There

are some public debts which need not be repaid at all. Such are the debts incurred by the government for productive and self-supporting enterprises such as railroads, gas and electric plants, water works, etc. In the words of Professor Seligman, " A perpetual debt in all such cases is a mere bookkeeping device. It constitutes no burden of any kind upon the community."[1] Here, therefore, we are to limit our discussion to those public debts which are contracted for other purposes than for directly productive and self-supporting undertakings.

It is generally maintained by authorities on public finance that a public debt must be paid off gradually; for if it is paid off at once, it means that a large sum of money must be raised by a sudden increase of taxation,[2] the evil economic consequences of which have been fully described in the previous chapters. Furthermore, if a large debt is paid off at one stroke, it will compel a large number of people suddenly to make reinvestment of the money received. A large sum of floating capital thus let loose at once will cause disturbance in the field of investments. Therefore, the government should not arrange the bonds so as to mature all at once. The payment of the principal of a public debt does not, in itself, tend to impoverish a nation nor does it hinder its economic development. But, on the other hand, the maintenance of the principal and the constant payment of accruing interest tend to cripple the productive capacity of the people. It is contended by a prominent writer on public finance that the process of debt payment simply involves the collection by the government of money from a certain set of individuals and the transfer of it to another set of individuals; that the government no longer has to pay interest charges, the amount

[1] E. R. A. Seligman, *Studies in Public Finance*, chap. x, p. 205.

[2] The advocates of a capital levy believe that a once-for-all levy will admirably solve the problem. *Cf. infra.*

of capital in the country remains the same, and if the new masters of capital are as enterprising as the old the nation loses nothing by the payment of its debt.[1]

For the sake of clearness and accuracy it will be necessary to supplement such a statement. That is to say, we must add a proviso (which the above writer seems to have tacitly assumed), namely, that the taxation on account of debt payment does not discourage production or the accumulation of capital; otherwise such a statement might be construed as meaning that there is no economic consequence in the payment of an internal debt. As we well know, a wise tax may stimulate industries to greater activity without in the least hindering savings, and vice versa. Therefore, the results to be expected from the extinction of the public debt depend, to a large extent, on the manner of collecting the money by the government.

There are several reasons why it is economically disadvantageous for a nation as a whole to maintain the principal of a debt. In the first place, the bondholders form a class which is guaranteed a living without labor. In the second place, the burden of taxation on the working class for the interest payment, and their dissatisfaction with the payment of taxes for the support of a favored class, retard the industrial development of the country.[2] Thirdly, public debts should be paid as soon as possible because government undertakings are always on the increase from year to year and, therefore, the old debts should be cancelled and the future revenues left unencumbered for expanding services. Fourthly, the business class in general will object to the heavy tax burden growing out of heavy interest charges to pay the "propertied" classes, who hold most of the bonds. In other words, since the business class is the largest payer of

[1] See H. C. Adams, *Science of Finance*, pp. 557-58.

[2] See *op. cit.*, p. 659.

taxes in society, it naturally favors the repayment of the debt as soon as possible by a tax on all, including the propertied class, in order to wipe out the privileged class of bondholders.[1] When we realize that most of the government bonds are tax-exempt, there is really an urgent need to redeem them at the earliest possible date. Since 1920, the United States government has happily been reducing at a rapid pace the enormous national debt of twenty-six billion dollars. The total debt retirements for the fiscal year 1927 amounted to $1,131,309,000. The grand total for the last eight years amounts to $6,972,599,000.[2] Great Britain has also steadily maintained high taxes to provide for the reduction of her war debt. Yet in the period between March, 1920 and March, 1926, she was able to reduce the total of her outstanding debt, which stood at £7,831,744,000 on the former date, by only £215,828,000.[3]

The effects on production and saving of high taxation levied continually for the purpose of debt redemption are undoubtedly very injurious. If indirect taxes assessed on particular commodities are relied on, people are discouraged from buying those articles. Capital resources are, therefore, diverted from the natural channels which would have yielded the most satisfactory results. If on the other hand, direct taxes are relied on, they tend to check saving and perhaps to drive rich people and their resources into foreign countries. The indirect injury inflicted on production in these ways is of course not measurable, but it is certain that the injury grows in proportion to the rise in the general rate of taxation.[4] Some writers, however, seem to exaggerate

[1] See E. R. A. Seligman, *Studies in Public Finance*, pp. 204-10.

[2] See *Fed. Res. Bulletin*, July, 1926, p. 501; July, 1927, p. 460.

[3] See *Colwyn Report*, p. 25.

[4] See *Contemporary Review*, December, 1919, "The Problem of the National Debt."

the significance of this particular point. There is no question but that a heavy income tax will be to many people a powerful discouragement to industry and saving. Yet we must not forget that there are, also, many others who are intent, at any cost, on saving for the future, for their children's education, for old age, or for what not; or, that there are still others who are, as Professor Seligman states in advocating progressive taxation, able to save in spite of themselves. Furthermore, heavy taxation on articles of extreme luxury are beneficial to society in any case, because the very rich are made to contribute thereby to the general expenses of society; while if the production of such articles is discouraged by such taxation, the result is equally salutary. To the extent that these conditions exist, high taxation for the purpose of debt redemption is less conducive to diminishing production than might be expected under other conditions.

There is yet another point in connection with the problem of repayment of an internal debt which calls for serious consideration. Heavy taxation for the purpose of meeting the interest charge on a public debt involves a series of deleterious transfers of wealth. It involves in general a transfer from the poorer to the richer classes in society, thereby accentuating the inequality of incomes. It also involves a transfer from the active and industrious to the passive and idle elements in society, because much taxation falls upon those who work and undertake productive risks, while much interest accrues to people who are not actively engaged in production. Furthermore, through the great weight of taxation which it necessitates, the service of the debt acts as a check to the growth of human capital by way of social investments in the capacities of human beings. It encourages false economies on the pretext that, if these economies were not made, the budget would not balance. The budget is, therefore, balanced and some reduction of taxation is often

secured at the expense of necessary social services, such as education and public health, the rapid development of which is urgently required. Insofar as this happens, production is diminished by our failure fully to utilize our human resources.

Debt redemption is, therefore, salutary not only because it reduces the debt burden but also because nearly all the money repaid to the bondholders will be reinvested. But a much smaller proportion of the money collected by taxation for debt reduction would have been invested if it had not been claimed by taxes. Generally speaking, then, the process of debt redemption involves a transfer from spenders to savers and enhances the accumulation of social capital and the production of wealth.[1]

Granted that it is economically advantageous to repay public debts as rapidly as possible, how should they be paid? This brings us to a consideration of the method of repayment. By far the most disputed method of repayment of the national debt, proposed and discussed in Great Britain immediately after the World War, was the so-called *Capital Levy*. Among those who favored a levy were men like J. A. Hobson, A. C. Pigou, Pethick Lawrence, and F. W. Edgeworth. Among those who opposed a levy were Sir Josiah Stamp, Hugh Dalton, W. W. Paine, Gaston Jèze (in France) and others. More recently, an extensive discussion on the Capital Levy took place, in 1924, in the form of a hearing before the Committee on National Debt and Taxation of Great Britain.[2]

The arguments brought forward on that occasion, in favor of the Capital Levy, may be summarized under five headings: The first and the most important point was that a levy would bring about a saving in interest charges on the debt. While the advocates of a levy admitted that this

[1] See *The Economic Journal*, Sept., 1925, pp. 352-53.

[2] See *Colwyn Report . . .*, pt. ii, sec. 1, pp. 246-96.

saving would partly be offset by a reduction in tax revenues following the levy, they believed that the net relief to the budget would still be such as to enable the government to make substantial reductions in taxation, or to extend expenditures in other directions, or to do both. Second, they argued that it was advantageous to repay the debt immediately if a further fall in prices is anticipated; third, that it was desirable to have a much reduced debt in the event of a future national emergency; fourth, that a more even distribution of wealth would follow a levy; and finally, that a levy would alleviate the sense of injustice felt by a large part of the people toward the continued existence of the immense debt.

Similarly, the arguments which were advanced in opposition to the Capital Levy may be enumerated as follows: First, the net relief to the budget would be too small to justify a levy on such a large scale. (About £3,000,000,000 was to be raised by a Capital Levy.) Second, a levy would have injurious effects on trade and industry, and they, in turn, on employment; besides, the country's credit abroad would sustain a shock. Third, the burden of such a levy could not be equitably distributed. Fourth, the political and administrative difficulties of a levy would be too great to insure its success.

It is not necessary for our purpose to make an elaborate exposition of the various points above mentioned.[1] Suffice it to say that the Colwyn Committee, after due consideration of both sides of the question, came to the following conclusion:

> We conclude that, even if there were a prospect of a Capital Levy being well received, the relief from debt which it offers

[1] For detailed discussion of various points, see *Colwyn Report*, pp. 247-90.

would be insufficient to justify an experiment so large, difficult and full of hazard; this would hold good in any circumstances not differing widely from those of the present time. Further, unless a levy were accepted with more good-will than it would be possible to anticipate under present conditions, it would be highly injurious to the social and industrial life of the community.[1]

The proposal to pay off billions of pounds of the national debt of Great Britain by a once-for-all levy on capital is a bold one indeed; yet it is not impracticable, according to the opinion of the Board of Inland Revenue.[2] Besides the advantages mentioned above, a levy would enable the taxpayers to rid themselves of the heavy burden of taxation which they otherwise will have to bear for years to come. Moreover, by a levy the distribution of wealth is made more favorable to the poorer classes of people, while the government is enabled to escape from the difficulty of balancing the budget. On the other hand, the opponents of the Capital Levy claim that production and saving are discouraged by the natural fear of the taxpayers for the possible future repetition of a levy; that a better apparent redistribution of spendable wealth may bring about less aggregate future production, because wealth in fewer hands is saved more than the same amount of wealth divided among many; that the shock to the taxpayers and the whole fabric of industry may bring about a temporary economic paralysis of the country.

Although we are aware of the many advantages of a Capital Levy, yet by that system many people would have to sell their properties to pay the tax. In addition, assessments of properties for the purpose of such a large tax are bound to be unequal. In short, frauds, inequalities, business disturbances and individual hardships would be the inevitable

[1] *Colwyn Report, op. cit.*, p. 296.

[2] See *ibid.*, p. 248; also, Appendix XXII.

outcome of an enormous capital levy. The tremendous shock given to the multitude through a special levy, and the consequent subjective burden due to the full realization of their future status, seems to be a far more powerful deterrent to industry and saving than would be a vague realization of their future burden, aided by prospects of future mitigation. When we stop to consider also the prospect of the future growth of population and productive power, as a means of diminishing the relative tax-burden, the resort to a capital levy should not be made unless absolutely necessary. The only sound and feasible method, which at the same time is acceptable to all classes of people, is the use of an ordinary system of a sinking fund. With the aid of progressive taxation and the conversion rights, the governments of Europe can gradually reduce their heavy debts through the slow but sound method of the sinking fund.

Thus far we have dwelt upon the domestic public debts only. A few words should now be said of public debts to foreign countries. As we have previously stated elsewhere, the only sound way for a debtor state to meet a large foreign payment is to increase its exports of surplus goods as well as to render services such as ocean transportation, insurance, etc.[1] That is the only way in which a debtor country can pay its obligations without endangering its domestic economic conditions.[2] The exportation of a large stock of gold will jeopardize the monetary system besides straining the financial structure of the country. The present financial difficulties of nearly every European country are largely due to this fact, although, of course, their exportation of gold during

[1] See "War Debts and International Trade Theory," H. G. Moulton, in *American Economic Review*, vol. xv (1925), pp. 700-716.

[2] Not an inconsiderable sum flows annually into a country through spendings of foreign tourists, but it is insignificant as a means of paying huge war debts of a country.

the World War was absolutely necessary because of the decline in their export trade. It is quite normal, therefore, for a debtor country to have a favorable balance of trade and for a creditor country to have an adverse balance of trade. The financial condition of the United States has been abnormal for the last seven or eight years, and it cannot continue very long without destroying the credit of the European countries. If, however, there is any considerable "neutral" market to absorb the exportable goods of the United States, both Europe and the United States can continue to have a favorable balance of trade without endangering their international financial relations. That is precisely the reason why many statesmen and business men in this country are anxious to revive trade relations with Russia.

Again, if the debt is large it means that a large portion of the results of the productive efforts of the country is constantly delivered over to foreign countries in the form of interest payments. This is very demoralizing to the people as well as economically disadvantageous to the country, for, if the commodities in question were not lost to outsiders, they would have furnished the people at home so much more means of livelihood. Therefore, speaking merely from an economic viewpoint, foreign debts, especially those incurred for wars, should be paid as rapidly as possible. The reasons why the payment of the allied debts to the United States has been deferred for such a long term are several: (1) The European countries are in no position to pay their debts quickly. (2) The allied debts are inextricably interwoven with the question of Reparations. (3) The rates of interest granted by the United States have been so magnanimously low that the European countries can afford to retain their debts to this country for a long time. (4) From the standpoint of the United States, the rapid repayment by Europe, even if possible, is not altogether desirable, for the

simple reason that the United States must allow her exports to diminish and her imports to increase. In other words, Europe's rapid repayment of the debt would slacken the industries of the United States and cause a period of industrial depression to follow.

In concluding this chapter, a few words should be said concerning the time of repayment. Paying back the public debt at a time of rising prices or high prices is easier for the government and works less hardship on the taxpayers for the reason that that is the time of prosperity and therefore the government can more easily obtain the wherewithal to pay the debt and the taxpayers can more easily bear the burden of taxation. The contrary is true in a time of falling prices or low prices. In the former case the bondholders will lose and in the latter, they will gain by getting their money back. Unless the war losses have been too severe, the period immediately after the war is favorable for the repayment of the war debt. The reasons are that taxes have been expanded; industries have come to be adjusted to the new taxes; and business is prosperous on account of higher prices. When such conditions prevail, the burden of debt payment will be little felt, as witness the United States after the World War.

With foreign debts, for countries of poor credit where high rates of interest are paid, the endeavor to repay at an early date is advantageous in that it improves the credit of such countries and makes conversions possible.[1] The recent repayment by France of her $70,000,000 of 8-percent bonds to the United States, out of the sale of her new 5-percent bonds to the amount of $75,000,000 in Sweden, may be taken as an example of such an endeavor.[2] As Professor Plehn has said in his lectures on public finance, the fact that should

[1] Professor Pierson emphasizes this point in his "Principles."

[2] See New York *Times*, Nov. 6, 1927.

always be remembered by any government is, that the majority of bondholders do not care to be repaid; in fact, so long as the credit of the government is good, they dislike repayment because it necessitates reinvestment. Provided government credit is good, bondholders could easily dispose of their public bonds in the money market whenever they desire to obtain cash. But the credit of a government depends upon its ability and willingness to repay its debts. Consequently, constant endeavors at repayment by any government serve not only as an enhancement of its credit but also as a threat of total repayment, and hence bondholders are willing to submit to a lower interest rate, to the greater gain of the government. This, of course, is the principle involved in ' conversion '.

CHAPTER VI

Summary and Conclusion

In the brief space allotted to a dissertation upon a subject of so large a scope, it is impossible to make the work either elaborate or complete. We have faithfully endeavored, however, to give in a general way an exposition of the history, the nature, the purpose and the economic effects of public debts. Since the World War, public debts have become one of the most outstanding problems of the day; nor is this a matter for surprise when we remember that, before the war, the total national debt of the world could be counted in tens of billions, while, after the war, they had to be counted in hundreds of billions of dollars. In Europe, the economic and financial stability of all the important nations now depends upon the satisfactory solution of the problem of national debts. For that reason it was our original plan to devote some space to the question of post-war international debts in Europe. But when we began to probe into the matter, we soon discovered that it was so fraught with political considerations that it could not be satisfactorily discussed without incurring the danger of far overstepping the limits of our present subject.

Before stating the conclusion, let us briefly summarize what has been said in the preceding pages in order to make clear the various points brought out therein.

We learned in Chapter I that some of the earlier writers on the subject were over-optimistic about public debts, while others were over-pessimistic. Among those who should be placed in the first category were Jean Bodin, William Petty, Melon, Bishop Berkeley, Richard Price and Isaac Pinto.

Their optimism was based mainly upon two ideas, generally considered as true in those days: first, that all government expenditures were good, and hence, debts contracted for public expenditures were beneficial to the country; and second, that the creation of a public debt meant the creation of an artificial wealth. The first belief rested on the further ideas that by public expenditures on public works of whatsoever kind, money is restored to the people (which in itself was considered beneficial) and that the poor are relieved because employment is given them. Petty seems to have been the stanchest believer in this doctrine. The second belief was due to the confounding of wealth with a counter of wealth. Pinto was, perhaps, the best exponent of that belief.

Among those who belonged to the second category, i.e., the writers who were over-pessimistic about public debts, were David Hume, Adam Smith, J. B. Say, Chalmers, John Stuart Mill and Nebenius. Their pessimism was based upon their belief that all public expenditures were unproductive and therefore lessened the capital of society. We saw in Chapter I, however, that—save on this one particular point —those writers had, on the whole, quite correct and comprehensive ideas on public credit and public debt.

Again, there was a group of writers who steered the middle course, that is to say, who neither favored public debts as a blessing nor denounced them as harmful to society. To that group belonged men like Charles Davenant, James Drake, Harley, Gould, Hutcheson, Pulteney, Blackstone, Robert Hamilton and Ricardo. They, for the most part, emphasized on the one hand the necessity of debt-redemption as the best means of maintaining the national credit, and, on the other hand, the need of relieving the people from heavy taxation due to heavy interest payment. These writers, as we have already learned from the detailed discussion of them in Chapter I, had admirably comprehensive ideas on public credit and public debt.

There are two writers who need to be separately mentioned because in their ideas they deviated far from their contemporaries, and because they exerted a profound influence over the financiers and the statesmen of their times. One was Richard Price and the other was Carl Dietzel. Price made an exposition, using elaborate numerical figures, of a system of sinking fund operating at compound interest. He advocated its great efficacy in repaying any amount of debt. The part of his " system " which exerted the most harmful influence on the thoughts of the public financiers of the time was his notion that the higher the interest charged on a public debt the more quickly it could be repaid. We should mention in passing, however, that Gould, before him, had had great confidence in a sinking fund operating at compound interest, and hence, was the forerunner of Dr. Price.

Carl Dietzel's notorious views on public debts were based on his materialistic interpretation of the state. In other words, he considered a nation as a huge capitalist and its conflicts with other nations as similar to business struggles among individual capitalists. Hence his notion that public debts incurred for wars are investments for the nation, and that repayment of them are unnecessary as long as they are not burdensome. Undoubtedly, Dietzel's underlying ideas are erroneous. It is true that, as years go on, the international wars seem to occur more and more as results of commercial rivalry. In other words, wars are waged by nations in the hope of crushing their rivals and taking possession of the economic power held by them. From the standpoint of political philosophy, therefore, there is an element of truth in Dietzel's ideas; at least the short-sighted statesmen seem silently to adopt his doctrine. From the economic standpoint, however, his doctrine is quite misleading. In the first place, modern wars are so costly and so destructive that even the victor nations suffer more, economically, than if

wars had not occurred. In the second place, even if a war were short and not very costly, the victor nation could not, under the present democratic tendencies in the world, destroy the economic power of the people of the vanquished nation. As we have previously stated in another chapter, only in the most improbable case where a war is short and uncostly and the victor can demand a huge indemnity from the vanquished, does Dietzel's theory hold true.[1] Even there, there is, as we know from the theory of international trade, an indirect effect on the victor nation of slackening its productivity in order that the indemnity be paid.

Let us now see wherein, according to our present views, the writers of the past on public debts were correct, and wherein they were erroneous. As afore-said, many of their ideas still hold true today. Thus, the opinion that a large public debt means heavy taxation for the interest payment and, therefore, the debt should be repaid as soon as possible, has been expressed by almost every writer except the above mentioned "optimists". That a just and punctual management of debts and taxes is the foundation of credit, was early recognized (Harley). That the using of a real surplus was the only effective way to pay a debt (Pulteney); that public debts should be paid to keep the nation safe for future emergency (Hutcheson, Blackstone, Hume, Nebenius); that public debts (that is, the bonds) furnish the merchants with a species of money which multiplies in their hands and, therefore, leads to greater trade activities (Blackstone, Hume); that large public debts, by necessitating heavy taxes for interest payment, discourage industrious people and encourage indolent bondholders (Blackstone, Hume); that taxes are preferable to loans, because the government will be prevented from imprudent expenditures for the reason that the people are averse to heavy taxation (Ricardo); that public

[1] The Franco-Prussian War of 1870 is the only one of modern wars that was economically advantageous to the victor.

loans apportion the burden entailed by a sudden emergency among a great number of successive years (J. B. Say); that they provide investment for small savings which otherwise would be hoarded or spent (Say); — these and many other less important points (which need not be repeated here) were all rightly conceived by many writers of the 17th and 18th centuries as well as by those of the early 19th century. A few writers even anticipated the most modern arguments: for instance, James Drake, against tax-free bonds, and Archibald Hutcheson, on the question of a levy on capital.

On the other hand, besides those already mentioned, several erroneous ideas were held by some past writers. For instance, the debts of a state were thought of by some as the debts of the right hand to the left hand and, therefore, not at all harmful to the body politic (Melon, Voltaire). That loans usually come from capital while taxes come from income (Ricardo); that loans come from that part of the circulating capital that otherwise goes to pay the laborers, and are hence harmful to the laborers (Chalmers, J. S. Mill); — these and other similar notions were held in accordance with their imperfect knowledge of the nature of capital, of the law of wages, etc.

With the control of the treasury transferred from the hands of the sovereigns to the people, and with a wider dissemination of knowledge, due to improvements in the means of communication, it is natural that modern writers should have thrown far more light on the questions of government finance, in general, and on those of public credit and public debt, in particular, than did the earlier writers. It is not necessary for us here to repeat all the special points which each of them has discussed. Let us then summarize the contributions made by present writers taken as a whole:[1]

[1] The names given in parentheses below are only for the purpose of designating those writers who, in our opinion, have specially emphasized the point in question.

As compared with past writers, contemporary writers have made a clearer analysis of the nature of public credit and public debt, although Nebenius, whose exposition of those subjects is almost unsurpassable, offers an exception. Recent expositors have firmly established the concept that public credit in itself is neither a good nor an evil, but that great benefit or great harm may come of it according to the way in which it is utilized. (Leroy-Beaulieu, Seligman, Bastable.) They have also made a clearer analysis of the differences in economic effects of taxes from those of loans, and, based upon this, have clearly recognized the advantages obtainable by the judicious application of both in financing emergencies. (Seligman, H. C. Adams). They have distinguished productive from unproductive, and ordinary from extraordinary, expenditures, and have studied the different economic consequences arising from loans made for those various purposes. Again, they have made an analysis of the different kinds of loans according to the sources from which they flow, or according to the manner in which they are repaid, and have studied their different effects. (Wagner, N. G. Pierson, Gaston Jèze, H. C. Adams.) And, finally, they have made a psychological analysis of the industrial effects of large loans to finance a war. (Seligman, Pigou.)

Public debts in themselves being neither good nor bad, their economic effects depend upon various conditions. In Chapters III, IV and V, we have discussed in turn the particular effects arising from each one of those conditions, always assuming that other conditions remain unchanged.

Dealing with the nature of public indebtedness, we have found that forced loans bring about an inflation of the currency and thereby disturb prices, commercial relations and distribution of wealth among the individual members of society; that short-term loans, if excessive, also cause similar disturbances. With reference to public bonds, we have

learned that bonds with a normal rate (that is, market rate) of interest have no unusual industrial consequences; that bonds with a high rate of interest are injurious in normal times because they cause transfers of capital from ordinary channels of production, but are beneficial in times of exigency because they aid in readjusting business relations and in encouraging production; and that bonds with an extremely high rate of interest are very harmful under any circumstances, because they tend to absorb all the capital of the marginal producers, thus tending to dry up the sources of taxation, and also because they bring about a sudden rise in the general scale of prices, which in turn disturbs industry and encourages speculation.

Again, public bonds having long terms are on the one hand advantageous to the government because a low interest rate is obtainable and the right of conversion is available, but are disadvantageous, on the other hand, because of the lurking danger of an ever-mounting debt. Bonds for public improvements should be made to run only as long as the life of the improvements, but bonds for public investments can be of very long duration, as long as the investments pay for themselves. Provided there is adequate provision for a sinking fund, so-called perpetual bonds are useful for the government and the people in cases of borrowings for non-commercial or semi-commercial investments, because the government is relieved of an untimely demand for repayment, while the people are relieved of heavy taxation because the burden of cost is distributed over a long period. In the case of war loans, however, perpetual bonds should not be resorted to because the danger of constant accumulation or of repudiation of the debt is very great. Terminable and life annuities are objectionable because they are on the whole more expensive to the government.

The privilege of conversion, usually attached to long-term

bonds, should be jealously guarded by the government, because the burden of a debt is greatly diminished by its utilization when the market rate of interest declines. But it should not be forgotten that its validity is directly proportional to the credit standing of the government.

Concerning the size of public bonds, popular loans of small denominations in time of war are extremely beneficial to a country because they arouse popular interest and thereby cultivate the spirit of thrift and economy among the mass of the people. Furthermore, the salutary influence of popularized public borrowing is felt even after the war, because the public debt being distributed among all classes of people, class antagonism is not aroused and the people are more willing to coöperate with the government in its post-war economy.

In a time of emergency, foreign loans should be resorted to as a general rule only to the extent of giving initial impetus to the country; otherwise they would tend to inhibit the spirit of industry and economy of the people. When a country at war is on the verge of complete exhaustion, as was the case with every belligerent in the World War, an exception must be made to that general rule. On the other hand, for the purpose of industrial undertakings, foreign loans ought to be utilized to the fullest extent, provided, of course, that the rates of interest are reasonable and that no political conditions are attached to them.

With reference to the purposes for which public debts are contracted, we have found that loans for temporary deficits are desirable and economical. Loans for emergencies have better economic effects than heavy taxation, because they cause less disturbance in the business relations of the people and because they encourage production much more than do heavy taxes. We have emphasized the fact, however, that resort to loans alone is dangerous because the credit of the

government would thereby be destroyed or, at least, greatly impaired. Loans for public investments are advantageous, first because the undertaking in question can be carried on uninterruptedly while, at the same time, the business relations of the people are not disturbed; and second, because the revenues derived from the investments could repay or support the expenditures. In municipalities where the danger of accumulating debts is great, strict enforcement of the sinking-fund provisions is absolutely necessary. Finally, we may lay it down as a general rule that debts, whether local or national, cause economic loss if they are made for unproductive purposes or extravagances, or are due to mismanagement; but if contracted for necessary public works and public investments, with adequate provisions for their repayment or their control, they are economically justifiable, because they help to promote the economic development of society without putting an excessive burden on the people.

In Chapter V, we discussed the economic effects of the redemption of public debts. First we took up the question of repudiation in order to ascertain why debts should be paid, and concluded that if a government wishes to maintain its credit, repudiation should never be resorted to. We also came to the decision that public debts contracted for productive and self-supporting enterprises need not be paid, unless, of course, at the request of the bondholders. On other kinds of debts we found that their repayment brings about several salutary consequences: first, the government is thereby free to use its revenues for its ever-increasing social services and is also enabled to meet any future emergency; second, its credit standing is enhanced; third, the people are relieved of heavy taxation due to interest charges and are encouraged to produce more and to save more; and lastly, the privileged class of bondholders is wiped out. With reference to the method of repayment we found that a sudden repayment of

a large public debt by heavy taxation (such as a capital levy) defeats its own end, and, therefore, an efficient system of sinking fund should be set up to secure repayment within a reasonable period of time. Finally, we found that, as a general rule, the period immediately after the war is propitious for the redemption of war debts, because then taxes have been expanded, business is prosperous, and the burden of debt payment is little felt. Similarly, a period of rising prices is favorable for the repayment of public debts.

Throughout the whole course of this dissertation our discussion of the various phases of public debts has been confined to the actually existing activities of all governments. As we have stated before in Chapter IV, a philosophical view of public debts would naturally suggest the fundamental question of the scope of government activities.

There are some writers, like Erik Lindahl for example, who think that the production of public goods should be carried on to the point where utility is just offset by costs or where the marginal satisfaction is the same for both public and private goods. According to Lindahl, the productive or reproductive forces of the state, such as agricultural experiments and the statistical investigations of industry and commerce, confer benefits that are measurable in terms of money, of market price, and these activities should be governed by the principle of marginal productivity: that is to say, they should be carried to the point where money spent for state regulation of private activity ceases to be more productive than if spent directly in private activity. He tells us that public consumers' goods, such as public art, public cultural education and public parks, should be governed by the principle analogous to the marginal utility of the private economy, and that they should approximate the point where benefits are offset by burdens, or where money spent for

public consumers' goods ceases to bring in greater satisfaction than money spent for private consumers' goods.[1]

It seems to us that such an individualistic and marginal-utilitarian theory of public expenditures is inadequate for two reasons: — In the first place, there is no satisfactory way of comparing the benefits and the sacrifices due to the production of public goods, because those who give and those who receive, or in other words, the amount of taxes paid and the amount of benefits received by the various individuals are not always proportional, as in the case of private goods. In the second place, and more significant still, the above theory is not sufficiently constructive. In our opinion, the theory of public expenditures, or the theory of public activities, should not be based upon individualistic, *quid pro quo* considerations; broader ideas of justice and of maximum welfare should be the standard of public expenditures. Furthermore, a long-time view, that is, ultimate effects, as well as immediate effects, ought to be taken into consideration.[2]

Professor Seligman has aptly stated in one of his lectures that government activities have passed through "repressive" and "ameliorative" stages and have entered a "constructive" stage. In our opinion, with public opinion behind it no modern government need hesitate to enter upon an undertaking which may have been carried on by private capital. The criterion should be the maximum general welfare attainable by public rather than private activities. There is really no fundamental conflict between individual liberty and national interest in democratic countries of today. The extension of state activities, so long as it is not arbitrarily made, is in no way an infringement upon individual liberty correctly defined, for there is no liberty of an individual in

[1] See H. W. Peck, *Taxation and Welfare*, pp. 31-32.

[2] *Cf. op. cit.*, p. 21.

society without the express or implied sanction of the society.[1]

When it comes to the practical application of the theory of public activities, we should have more definite, guiding rules. But precisely here we encounter the greatest difficulty, because political considerations are closely connected with economic considerations. It is generally conceded by writers on public finance, however, that the government should do those things which are socially desirable but which do not bring business profits to individuals, such as the reclamation of waste lands and building of public parks; and that it should do those things which will be remunerative at such a distant future that they do not offer a sufficient incentive to private activity: re-afforestation, for example. It is also generally admitted that the government should run those industries which, though socially disadvantageous and to be discouraged, public opinion does not yet permit to be completely abolished: the manufacture and sale of liquor, for example. These activities are all non-commercial or semi-commercial in nature. Here we should like to go one step farther and add that the government should at least control all those commercial enterprises which affect the whole or a large section of society, whenever and wherever they involve great wastes and glaring injustices on account of private management. To such government activities would belong not only the operation of public utilities but also the production and sale of the necessities of daily life, such as sugar, flour, meat, etc. Fortunately, in the case of all these the intervention of the government by way of regulations through various specially created 'Commissions' and by special legislation has, for the most part, obviated the necessity of resorting to direct public production and distribution.

[1] *Cf.* Gustav Cohn, *System der Finanzwissenschaft* (Veblen's translation), p. 59.

There is one undertaking which has been so well established and the efficiency of which has been so universally recognized that no one objects to its being run by the government. That is the postal system. As regards the other enterprises usually comprised in the class of so-called public utilities the arguments pro and contra are still being actively discussed.[1] To deal with them adequately here is of course out of the question, as they would occupy an entire treatise by themselves. In general, however, this much can be said of them: A certain kind of public enterprise may be successfully operated in one country but may be a failure in another country. Thus, the government railroads in Prussia and Japan have been a success, but those in France, Austria, Hungary and other countries have been unsuccessful. Again, even within the same country, an enterprise may be successfully carried on by the government of one locality but may be a failure in another locality.[2] In Switzerland, the government telephone service is excellent, but in France, it has been inadequate in quantity and unsatisfactory in quality.[3] In the United States, the municipal traction and gas companies in some States have been conducted successfully, but in other places they have been less successful or failures.[4]

In European countries the telephone and telegraph services are performed wholly or in large part by national and municipal governments. Railroads are partly run by the government in most of them, as are most of the so-called public utilities, such as gas, water and electric light services. In the

[1] See additional bibliography at the end of this dissertation.

[2] See *American Telephone and Telegraph Co.'s Report of Special Committee* (1919), Appendices B and C, pp. 55-72.

[3] See A. N. Holcombe, *Public Ownership of Telephones on the Continent of Europe* (1911), p. 445.

[4] See Martin G. Glaeser, *Elements of Public Utility Economics* (1927), p. 685; also pt. iv, chap. 31.

United States, however, the extent of public ownership and operation is as yet very limited. Only in the field of water supply and of irrigation utilities do public enterprises hold a preponderant position over private enterprises.[1] Although limited in extent, there are instances of successful public utilities even in this country. Gas utilities of Richmond (Virginia), of Duluth (Minnesota), of Omaha (Nebraska); electric utilities of Los Angeles, Seattle and Cleveland (Ohio); and street railways in Seattle, San Francisco and Detroit are good examples.[2]

Even from the above cursory observations of the status of public ownership in the world, we may safely say that public ownership, in general, is no longer in an experimental stage. There are enough examples of it to vindicate the usefulness of its existence. The only question, therefore, is as to the advisability of its application in any specific field. We are thus of the opinion that public ownership *per se* is economically justifiable, and, furthermore, ought to be vigorously advanced in all such fields as afore-mentioned (*supra*), whenever and wherever private ownership runs counter to public interest and there is certainty of success for public ownership. To the extent that public opinion becomes ripe for the entrance of the government into such enterprises, and inasmuch as the capital required for such enterprises must ordinarily be secured through public credit, it follows that public debts contracted for such a purpose are truly conducive to great public welfare. The good economic effects of public debts are boundless in this field. We shall probably in the future find in public ownership a perpetual occasion for and, perhaps, the greatest object of public debt. To the extent that this eventuality is realized it may be said that the chief effect of public debts in the future will be found, in time

[1] See *ibid.*

[2] C. D. Thompson, *Public Ownership, passim.*

of peace at least, in this field; and to the extent that public ownership proves successful the beneficial consequences of public credit will be recognized as of paramount importance.

To what extent the national governments (to say nothing of the local governments) of the world will form public debts in the future for the purpose of public ownership of various enterprises, it is hard to predict, for much depends upon the future political movements in the different countries. In the case of municipal governments, however, the situation is different. Undoubtedly, the present tendency toward an ever-growing expansion in the field of public ownership will continue in the future. In Europe and Asia at least, the probability is that the municipal governments will encroach more and more in the future upon the field of private enterprise, at least in all the subjects included under the term of public utilities.

BIBLIOGRAPHY

General Texts

Adams, H. C., *Public Debts* (New York, 1887).

——, *Science of Finance* (New York, 1898).

Bastable, C. F., *Public Finance* (3rd ed., London, 1903).

Beaulieu, Paul Leroy, *Traité de la science des finances* (3rd ed., Paris, 1883).

Brown, H. G., *The Economics of Taxation* (New York, 1924).

Bullock, C. J., *Selected Readings in Public Finance* (2nd ed.).

Cohn, Gustav, *System der Finanzwissenschaft* (English translation by Thorstein Veblen, Chicago, 1895).

Dalton, Hugh, *Principles of Public Finance* (London, 1923).

Daniels, W. M., *The Elements of Public Finance* (New York, 1899).

Hunter, M. H., *Outlines of Public Finance* (New York, 1921).

Lutz, H. L., *Public Finance* (New York, 1924).

Pierson, N. G., *Principles of Economics* (English translation, New York, 1912, vol. ii).

Pigou, A. C., *Wealth and Welfare* (London, 1912).

——, *The Economics of Welfare* (London, 1920).

Plehn, Carl C., *Introduction to Public Finance* (4th edition).

Roscher, W., *Principles of Political Economy* (English translation), 1878, vol. i.

Seligman, E. R. A., *Essays in Taxation* (9th edition, New York, 1921).

Shirras, G. F., *The Science of Public Finance* (London, 1924).

Stamp, Josiah, *Studies in Current Problems in Finance and Government* (London, 1924).

Wagner, Adolph, *Finanzwissenschaft*, vol. i (3rd edition).

Specific Books

Allen, J. E., *The War Debt and How to Meet It, etc.* (London, 1919).

Angas, L. L. B., *Germany and Her Debts* (London, 1923).

Bass, J. F. and H. G. Moulton, *America and the Balance Sheet of Europe* (New York, 1921).

Bogart, E. L., *War Costs and their Financing, etc.* (New York, 1921).

Davies, A. E., *The Case for Nationalization* (London, 1920).

——, *The State in Business* (London, 1920).

Day, J. T., *The New Way to Pay Old Debts, etc.* (London, 1919).

Dewey, D. R., *Financial History of the United States* (8th edition).
Edgeworth, F. Y., *A Levy on Capital for the Discharge of Debt* (London, 1919).
Fisk, H. E., *French Public Finance in the Great War and Today* (New York-Paris, 1922).
——, *The Inter-ally Debts, etc.* (New York, Paris, 1924).
Hirst, F. W., *The Political Economy of War* (New York, 1915).
Hobson, J. A., *Taxation in the New State* (London, 1919).
Hodges, Frank, *Nationalization of the Mines* (London, 1920).
Hollander, J. H., *War Borrowing* (New York, 1919).
Kiernan, T. J., *British War Finance and the Consequences* (London, 1921).
Kirkaldy, A. W., *British Finance*, 1914-1921 (London, 1921).
Lancaster, L. W., *State Supervision of Municipal Indebtedness* (Philadelphia, 1923).
Lawrence, F. W. P., *The National Debt* (London, 1924).
——, *A Levy on Capital* (London, 1918).
Morgan, C. S., *Regulation and the Management of Public Utilities* (Boston, New York, 1923).
Moulton, H. G. and Bass, *America and the Balance Sheet of Europe* (New York, 1921).
Peck, H. W., *Taxation and Welfare* (New York, 1925).
Pigou, A. C., *Political Economy of War* (London, 1921).
——, *A Capital Levy and a Levy on War Wealth* (London, 1920).
Scott, W. A., *Repudiation of State Debts* (New York, 1893).
Seligman, E. R. A., *Currency Inflation and Public Debts, etc.* (New York, 1921).
——, *Studies in Public Finance* (New York, 1925).
Thompson, C. D., *Public Ownership* (New York, 1925).
Withers, Hartley, *War-Time Financial Problems* (New York, 1919).
Anonymous, *The State Debt and the National Capital.*

Historical References

Berkeley, George, "The Querist" (From *The Works*, edited by George Sampson, vol. iii, London, 1898).
Blackstone, *Commentaries*, bk. i.
Chalmers, Thomas, *Political Economy* (New York, 1832).
Davenant, Charles, *A Discourse upon Grants and Resumptions* (1700).
——, *An Essay upon Ways and Means of Supplying the War* (2nd edition, 1695).
Dietzel, Carl, *Das System der Staats-Anleihen im Zusammenhang der Volkswirthschaft* (1855).
Drake, James, *An Essay Concerning the necessity of Equal Taxes* (London, 1702).

Gould, *An Essay on the Public Debts of this Kingdom* (London, 1726).

Hamilton, Robert, *Inquiry Concerning the Rise and Progress, the Redemption and Present State and the Management of the National Debt of Great Britain and Ireland* (3rd edition, 1818).

Harley, *An Essay upon Public Credit* (London, 1710).

Hume, David, *Essay on Public Credit* (London, 1752).

Hutcheson, Archibald, *A Collection of Treatises Relating to the Public Debt and the Discharge of the Same* (London, 1721).

McCulloch, J. R., *Select Tracts on the National Debt* (London, 1857).

Melon, Jean-Francois, *Essai Politique sur le Commerce* (1736).

Mill, J. S., *Principles of Political Economy* (5th edition, vols. i and ii).

Nebenius, Karl F., *Der öffentliche Kredit* (1820).

Petty, William, *A Treatise of Taxes and Contributions* (London, 1667).

Pinto, Isaac, *An Essay on Circulation and Credit* (English translation by Sir Philip Francis, London, 1774).

Price, Richard, *Observations on Reversionary Payments* (3rd edition, 1773).

Pulteney, *The Case of the Sinking Fund* (London, 1726 ?).

——, *A State of the National Debt* (London, 1727).

Ricardo, David, *The Works* (3rd edition, 1871, by J. R. McCulloch).

Ross, E. A., *Sinking Funds* (1892).

Smith, Adam, *Wealth of Nations* (Everyman's edition), vol. ii.

Journals and Periodicals

Journal of Political Economy, July, 1917 (vol. 25), "Taxation *v.* Bond Issue for Financing the War," E. D. Durand.

The Annals of American Academy, Jan., 1918 (vol. 75), "Loans *v.* Taxes in War Finance."

Same, for July, 1922, "The Public Financial Burdens of the Principal Countries of the World," L. R. Gottlieb.

Same, for March, 1924, "Making National Debts National Blessings," S. M. Patten.

Same, for May, 1924, "The Trend in City Expenditures," L. W. Lancaster.

Economic Journal, June, 1925; also Sept., 1925, "Public Debt."

The New Republic, May 7, 1924, "Russian Debts and a New Loan."

American Economic Review, March, 1918, "Mandeville in the 20th Century," S. M. Patten.

Same, for June, 1918, "Who is the 20th Century Mandeville?" E. R. A. Seligman.

Same, for Dec., 1925, vol. xv, "War Debts and International Trade Theory," H. G. Moulton.

National Municipal Review, March, May, June and August, 1924. Also, vol. ii, 1922 and May, 1923, "Pay-as-you-go Plan."

Same, for June, 1925, "Are we Redeeming our National Debt too Hastily?" T. D. Zukerman.

American City, Feb., 1924, "Total Debt and Revenues of Governmental Units."

Contemporary Review, Dec., 1919, "Problem of the National Debt," A. C. Pigou.

Weekly Review, May 22, 1920, "Certificate Borrowing and the Floating Debt," J. H. Hollander.

Quarterly Journal of Economics, May, 1917, "Financing the War," C. J. Bullock.

Same, for Nov., 1919, "Debts, Revenues and Expenditures....," L. R. Gottlieb.

Same, for Feb., 1919, "Burden of War and Future Generations," A. C. Pigou.

Same, for Feb., 1923, "Growth in Local Tax Burdens," L. R. Gottlieb.

Fortnightly Review, Sept., 1922, "International Indebtedness," W. Walker.

Yale Review, Oct., 1922, "War Debts," R. C. Leffingwell.

Revue de science et de legislation financières, numbers for January to September, 1925, articles on "Public Credit," by Albert Jèze.

A National Survey of State Debts and Securities, published by the Bank of America, New York City, 1922.

New York Times, Nov. 6, 1926; also Nov. 8, 1926.

Official Reports and Documents

Report of House of Commons' Select Committee on premium bonds.

Colwyn Report of Committee on National Debt and Taxation, London, 1927.

Federal Reserve Bulletin, from March, 1926 to November, 1927, inclusive.

California State Comptroller's Annual Report of the Financial Transactions, 1921.

United States Department of Commerce, Bureau of the Census Reports, 1913-1925, inclusive.

Annual Report of the Secretary of the Treasury on the State of the Finances (United States Treasury Department). Reports for the years 1924 and 1925.

Additional Bibliography, on Public Ownership

Yves Guyot, *Where and Why Public Ownership has Failed* (Translation by H. F. Baker, N. Y., 1914).

Leon Cammen, *Government Ownership of Public Utilities.*

Martin G. Glaeser, *Elements of Public Utility Economics* (1927).

American Telephone and Telegraph Company, The Report of Special Committee on Government Ownership and Operation of Public Utilities (1919).

Lord Alfred Emmott, *Nationalization of Industries* (London, 1920).

Harry W. Laidler, *Public Ownership, Here and Abroad.*

A. N. Holcombe, *Public Ownership of Telephones on the Continent of Europe* (1911).

United States Agricultural Forestry Report, February 1, 1922.

W. M. Acworth, *Historical Sketch of Government Ownership of Railroads in Foreign Countries* (Washington, 1917).

Julia E. Johnsen, *Selected Articles on Government Ownership of Coal Mines.*

Samuel O. Dunn, "The Failure of Government Ownership in Canada," an article in *The Journal of Political Economy,* June, 1916.

James Mavor, *Government Telephones, the Experience of Manitoba, Canada* (New York, 1916).

Edith M. Phelps, Selected articles on the American Merchant Marine.

Socialization Commission, Report of 1920 on "The Socialization of the Coal Mines in Germany."

The Industrial Commission of North Dakota, Report of June 1, 1921, entitled "The North Dakota Industrial Program."

The Marketing Department of South Dakota, Report of June, 1920, entitled "State Ownership of Terminal Elevators, Flour Mills and Packing Plants."

INDEX

VITA

The author of this dissertation was born in Kyoto, Japan, on December 20, 1895. Coming over to the United States at the age of nine, he attended elementary and high schools in California, graduating from Coachella Grammar School in Riverside County and Manual Arts High School of Los Angeles. In 1915, he entered the University of California and was graduated from that University, in 1919, with the degree of A.B. For several years he aided his father in business while studying further in the University of California. In 1922, he entered the Graduate School of Economics in Columbia University in the hope of studying under Professor Edwin R. A. Seligman, and received the degree of M.A., in the following year, presenting the Master's thesis entitled "History of Taxation in Japan up to and through the Feudal Ages". From 1923 to 1928, he has been studying in the same institution for the Ph.D. under the guidance of Professor Seligman and attending the seminar conducted by Professors Seligman, Seager, Simkhovitch, and Mitchell.